A STUDY ON

SEETHA KAZHICHAL

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CERTIFICATE

Certified that I have gone through the dissertation submitted by ---------- a student of Final M.D.(s), Branch IV, Kuzhandhai Maruthuvam of this college and the dissertation does not represent or reproduce the dissertation submitted and approved earlier.

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INTRODUCTION

Medicine is an art of fundamental importance to the healthy survival of humanity . Siddha, one of the ancient system of medicine has got a holistic history of origin . Being a science of life, it helps the world by not only giving solutions to health problems but also by paving the way to attain the ultimate aim of the life.

The word "**Siddha**" comes from '**Siddhi**' which means perfection or healthy bliss. It generally refers to the Astamaa siddhi i.e, the eight supernatural powers. Those who attained these powers are known as the siddhars. The basic principle of siddha system is 96 Thathuvas of which panchapootha theory and Mukkutra theory are very important.

The Universe is composed of five elements viz., Earth,Water,Fire,Air,Ether (Mann, Neer, Neruppu, Kaatru and Aakayam). The human anatomy, physiology, pathology of disease, materials for the treatment and the food for sustenance all fall with in the five elemental categories.

The pathology in siddha system depends upon the Mukkutra theory viz., vatha ,pitha and kaba.The normal order of vatha , pitha, kaba is in proportion of 1 : 1/2 : 1/4 respectively.

This is stated in the following verses.

“ வுழங்கிய வாதம் மாத்திரை யொன்றாகில்
தழங்கிய பித்தந் தன்னி லரைவாசி
அழங்குங் கபந்தானடங்கியே காலோடில்
பிறங்கிய சீவர்க்குப் பிசகொன்று மில்லையே”

(குணவாகட நாடி)

Imbalance results in disease.

This can be inferred from the following Thirukkural,

"மிகினும் குறையினும் நோய் செய்யும் நூலோர்

வளி முதலா எண்ணிய மூன்று."

- திருவள்ளுவர்.

The clinical methods through which the correct diagnosis made out are Envagai thervugal. They are Naadi, sparissam, Naa, Niram, Mozhi, Vizhi, Malam, and Moothiram.

Kuzhandhai Maruthuvam is a branch of medical science of siddhars, which deals with the diseases and treatment of child. In Kzhandhai Maruthuvam, the diseases of children are broadly classified into Agakarana Noigal and Purakarana Noigal.

SEETHA KAZHICHAL,one of the three kazhichal noigal occuring in infants and children due to varied Aetiology is one among the health hazards, that a society faces frequently. The Aetiological factors (In take of improperly cooked food stuffs, Drinking impure water,living in over crowded areas), clinical features of the disease (Bloody mucoid stools,abdominal pain,fever,painful defaecation) explained in the siddha literature are more or less related to Amoebic and Bacillary dysentry described in modern system of Medicine.

This clinical study deals with the disease "**SEETHA KAZHICHAL**" with the trial medicine ,"**ATTHI PINJU CHOORANAM**" which is a simple herbal preparation.

AIM AND OBJECTIVES

Seetha kazhichal, of which the signs and symptoms are related to dysentery in modern aspect is a major health hazard in the developing countries like India. It forms one of the major causes of sickness among infants and children, which causes a heavy economic burden on health services.

India is a country, having large population in the world, where people of different socio economic status are found. Poor children who live in densely areas with poor sanitary facilities, lack of personal and environmental hygiene are the common victims of this disease. If proper attention has not been given, it may lead to many complications like dehydration, Rectal prolapse,Septicaemia etc.,

Objectives:

- To explore most efficacious drug for **seetha kazhichal.**
- To have a clinical trial on seetha kazhichal affected children with **Atthi Pinju chooranam**.
- To evaluate the disease seetha kazhichal clinically by careful examination on aetiology, clinical features, differential diagnosis, investigations, diagnosis, treatment, diet, prognosis, complications etc.
- To collect the literary evidences regarding the disease seetha kazhichal as per siddha system.
- To make comparative study of this disease with morden aspects.(Bacillary and Amoebic dysentery)

- To evaluate Biochemical and pharmocological analysis of the drug.
- To evaluate efficacy of trial medicine on anti microbial activity by invitro studies.
- Control of disease by creating awareness of proper hygiene.
- Being a herbal preparation, Trial medicine is safe and drugs are easily available at low cost.

REVIEW OF SIDDHA LITERATURE

Eyal (Definition):

வயிறு கடுத்து அடிக்கடி சிறிது சிறிதாயேனும் அல்லது வயிற்றுக் கடுப்பு அதிகமின்றி அளவு கடந்தேனும், சீதக்கட்டும் குருதியும் கூடியேனும் கழியும்.

Seetha kazhichal means the dysentery due to specific inflammation and ulceration of the mucus lining of large intestine resulting in evacuation of stools mixed with mucus and blood (T.V. sambasivam pillai. 1978).

Verupeyarkal (synonyms):

- Amakazhichal,
- Seethapethy
- Kadduppu kazhichal,
- Seetharathapethy
- Vayettru kaduppu,
- Vayettrulaivu
- Seetha ratha Kazhichal
- Seetha Kaduppu
- Ratha Kaduppu
- Ama pethy
- Amaratha pethy
- Giragani
- Girani
- Seetha athisaram
- Seetha ratha girani
- Kuzhanthai seetha pethy
- Vayettru kottal

(T.V.Sambasivam Pillai Dictionary)

கழிச்சல் நோய் வகைகள் (Classification):

“Seetha Kazhichal” is a disease which occurs both in children and adults. It has been described as one of the Kazhichal noi in various Siddha literatures.

In Kuzhandhai Maruthuvam, it is classified under Kazhichal vaguppu, where as it has been described separately in siddha maruthuvam.

Various classifications of kazhichal noi, which have been described in several siddha texts, are given below,

1. In Kuzhandhai Maruthuvam three types of Kazhichal noikal have been described

i. Mantha Kazhichal
ii. Kana Kazhichal
iii. Ama Kazhichal (Seetha Pethy)

At the same time,

i. Veppu Kazhichal
ii. Raththa Kazhichal
iii. Athisara Kazhichal
iv. Kaduppu Kazhichal
v. Porumal Kazhichal
vi. Pachilai Kazhichal
vii. Vidaa Kazhichal

have also been mentioned in the treatment of Kazhichal noikal in Kuzhandhai Maruthuvam.

2. In *T.V.Sambasivam pillai dictionary,* the following Kazhichal noikal have been mentioned.

i. Seetha Kazhichal (passage of mucus)

ii. Raththa Kazhichal (passage of Blood)

iii. Sala Kazhichal (watery diarrhoea)

iv. Soba Kazhichal (Diarrhoea with great weakness and exhaustion)

v. Vaeludai Kazhichal (white diarrhoea)

vi. Vayettu Kazhichal (gastrogenic diarrhoea)

vii. Sangara Kazhichal (diarrhoea with various symptoms)

3. In *Jeeva Rakshamirtham*, the following Kazhichal noikal are given

i. Raththa Kazhichal

ii. Sala Kazhichal

4. Two types of “Kazhichal” have been described in *pararaja sekaram balaroga nidhanam*

i. Vayettru Kaduppu

ii. Vayettrulaivu

5. In *Athma rakshamirutham* also called *Vaidya Sara Sangirakam* fifteen types of Kazhichal noikal have been classified.

“சொல்லுகிறேன் கழிச்சல்வகை தோஷந்தன்னை
சுழிமாந்த கழிச்சலெனச் செப்பலாகும்
வெல்லுகிறேன் பாற்கழிச்சல் வரட்கழிச்சல்
வீறான வாந்தியின்றன் கழிச்சலாகும்
புல்லுகிறேன் கணக்கழிச்சல் மாந்தக்கழிச்சல்
புகழான ஆமத்தின் கழிச்சலாகும்
கொல்லுகின்ற சலக்கழிச்சல் வெதுப்புக்கழிச்சல்
கூறான ரத்தத்தின் கழிச்சலாமே”
“ஆமேதான் அதிசாரக் கழிச்சலாகும்

அப்பனே பொருமலின் கழிச்சலாகும்
போமேதான் சீரத்தக் கடுப்புவாகும்
பொல்லாத கழிச்சலென்று நாமமெய்தும்
தாமேதான் பச்சிலைக் கழிச்சலாகும்
சார்வான விடக்கழிச்சல் சாற்றலாகும்
நாமேதான் சொன்னோமே கழிச்சல் மார்க்கம்
நவின்றிட்டார் பாலருக்கு நவின்றிட்டாரே”

i. Suzhimantha Kazhichal
ii. Paal Kazhichal
iii. Varat Kazhichal
iv. Vaanthi Kazhichal
v. Kana Kazhichal
vi. Maantha Kazhichal
vii. Ama Kazhichal
viii. Sala Kazhichal
ix. Vethuppu Kazhichal
x. Raththa Kazhichal
xi. Athisara Kazhichal
xii. Porumal Kazhichal
xiii. Raththa Kaduppu
xiv. Pachilai Kazhichal
xv. Vida Kazhichal

6. In *Noi nidhanankal,* ten types of Kazhichal noikal are given

i. Moola Kazhichal
ii. Vadha girani
iii. Pitta girani
iv. Seetha girani
v. Vatha pitta girani
vi. Pitta Sethuma girani
vii. Vatha Seetha girani
viii. Thontha girani
ix. Vayettru Kaduppu
x. Vayettru Kothippu

7. According to *Agathiyar vaidya Kaavium* 1500, Kazhichal is classified in to six types.

"கழிச்சலென்ற கிராணியிலே விதமாறப்பா
கண்ட பித்தம் அனல் வாதம் வாயுவாகும்
அழிச்சலென்ற ஐயநீர் மூன்றுங்கூடி
அப்பனே பேதிக்கும் பலந்தான் போகும்
தெழிச்சலென்ற வாயுதான் மேகபேதி
திறமான மூலத்தின் தோடபேதி
பழிச்சலென்ற சங்கான பேதியொன்று
பாரப்பா வாயுவொன்று ஆறுமாச்சே"

i. Vatha Kazhical
ii. Pitta Kazhical
iii. Kaba Kazhical
iv. Moola Kazhical
v. Sangana Kazhical
vi. Mega Kazhical

8.Same classification has been given in *Thirumoolar Vaidhyam*" *Karukkidai* 600.

"கழிச்சல் கிராணி காணும் விதம் கேளு
அழிச்சிய பித்த மணல் வாத மையமாம்
செழுச்சிய வாயு சேர்ந்திவை மூன்றாலே
பழிச்சென பேதிக்கும் பார் பெலம் போகுமே"
"பெலமான மேகத்திற் பிறந்ததொரு பேதி
குலமான மூலத்திற் கொடியதொரு பேதி
சுகமான வாயுவாற் சங்கித்தொரு பேதி
வுலமானதாறும் வகுத்த முறையாமே"

From the above, many authors describe the types of Kazhical noikal. But the dissertation topic "**Seetha Kazhichal**" has been selected from Kuzhandhai Maruthuvam.

Noi varum Vazhi (Etiology):

The causes for seethakazhichal mentioned in various siddha texts are follows,

i.Intake of food stuffs which are not easily digestable.

ii.Intake of excessive pungent and sour tasted food stuffs.

iii.Taking large amount of sweets, mutton and improperly cooked foodstuffs.

iv.Drinking impure water like sunaineer and karchunna neer.

v.Wandering in hotsun and exposure to cold air.

vi.Living in over crowded areas.

vii.Suffering from seetha suram.

viii.Improper treatment for “Athisara Noi”

The above mentioned causes are stated in the following verses.

“மானென்ற வயிற்றில் மந்தமிருக்கும் போது
மாப்பண்ட மதுரங்கள் மங்கை கோஷ்டி
ஊனென்ற மாமிசங்கள் வேகாப்பண்டம்
உண்டதாற் கிராணி வந்துற்பவிக்குங் கண்டாய்”

- யூகிசிந்தாமணி

“தானாக உண்டாகும் விதத்தைக் கேளாய்
தரணிதனிற் குளிர்ச்சியுடன் விடசத்துத்தானும்
தேனாக மிகுதீனி புசித்தாலும்
திரண்ட சனக்கூட்டத்தில் போவதாலும்
மானான சீதசுரங் காணும்போதும்
மகத்தான இந்நோயுண்டா மென்று
கோணான நூல்தனிலே பெரியோர் சொன்னார்
கொற்றவனே யதினுடைய குணத்தைக் கேளே”

- அகத்தியர் குணவாகடம்

“Guru naadi Nool” explains the causative organism and the pathogenesis of the disease.

“கேளுமினிக் கிருமியால் வந்த கிராணியைத்தான்
கிருபையுடன் மூலத்தில் வேவு கொண்டு
நாளுமது கிருமியதின் குடலைச் சுற்றி
ரத்த முண்டாஞ் சுரோணிதத்தால் மலமுங்கட்டி
மீளுவது வாய்வு சென்று விரவித்தானும்
விரவியங்கே கலந்திருக்கில் கிருமியெல்லாம்
கேளுமது பலவிதமாய்க் கழியும் பாலர்
குடி கெடுத்த கிருமி செய்த கிராணிதானே”

Due to excessive heat the pathogenic micro organisms (Kirumigal) multiplies in large numbers in the intestine. They make the stools dry, decomposed and producing foul smelling gases (vayu). Then it produces Kazhichal.

Murkuri Gunangal (premonitory symptoms):

Head ache, nausea, pain in the abdomen, burning sensation in the anus, tenesmus due to increased peristalitic movement are the symptoms produced in the initial stage of the disease.

Pothukuri Gunangal (General Signs and Symptoms):

Following the premonitory symptoms, there is passing of loose stools containing small amounts of mucus and blood, pain in the abdomen and burning sensation in the anal region are aggravated.

Besides passing of mucus and blood, frequent scanty stools are present. During that time intense abdominal pain is observed. Due to severe pain, the patient will be always in sitting posture. The patient may pass loose stools many times in a day. If it is not controlled by proper treatment the patient gets severe discomfort, naadi appears weak,eyes will be sunken,

tongue becomes dry, and symptoms of muppini will occur and may be fatal.

The above mentioned features are stated in ‘siddha maruthuvam’.

The following symptoms and signs occur in vayettru kaduppu.

இடுப்புக் கடுத்து வயிறுளைத்திட்டிளகிச் சீதமாற்றீந்து
முடுக்கிக் துயரமுடன் மூலந்தோன்றி மலமும் கழிந்திருக்கும்
அடுத்தோரன்ன மருவருக்கும் மறவே யங்க மெலிந்து வரும்
தொடுக்கும்வயிற்றுக்கடுப்பென்று சொல்லுங் குணங்களிவையாமே”

- பரராசசேகரம் (பாலரோக நிதானம்)

Patient have gripping pain in the lower abdomen, with irritation in and around the anal region, rectal tenesmus with loose stools, poor appetite and weakness of the body due to excessive blood loss in stools.

The same features have been described in *Agathiyar* 2000

“இடுப்புக் கடுத்து வயிறுளைந்து இளகுச் சீதமாற்றீந்து
முடுகக்குத்தி முக்கி துயரமுமாய் உண்ணா மலமே கழிந்தடங்கும்
அடுத்தோரன்னந் தனைந்தேடா தறவே மெலிந்து வருந்தொடுக்கும்
வயிற்றுக் கடுப்பென்று சொன்னோந் செய்யும் துயர்கண்டே”

-அகத்தியர் 2000

The following Kurigunangal have been described for “Vayettru ulaivu”

“வருந்திடும் வெதுப்புக்காயும் வயிறுளைந்திடுந்தீன்செல்லா
துரத்திடு முறங்க வொட்டாதுள மலங்கழிந்து சோரும்
பொருத்தெலாங் கழலும் புண்போற் பொருக்கொணா நடுக்கங்கூறல்
பொருத்திடுங் கழிச்சல்சீதம் வெறுவயிற்றுளைவிதாமே”

-பரராசசேகரம் (பாலரோக நிதானம்)

Patient is having fever with abdominal pain, loss of appetite, loose motion with mucus, general weakness and shivering.

In chronic stage, there is regurgitation of milk and anaemia, fever, chillness of extremites are observed.

“உண்டபா லெதிரெடுக்கும் உடல்பல முழக்கங் காட்டும்

கண்டுமே ரத்த சாலச் சுரமிகிந்திருக்கும் மேனி
கண்டுசேர் மொழியுந் தாழ்ந்து காலொடு கையுநீத்து
விண்டிடி லாமென்று விளம்பினர் முனிவர் தானே”

-பாலவாகடம்

MUKKUTRA VERUPADUGAL (PATHOLOGY)

According to siddha system of medicine, diseases are produced due to derangements in Thridoshas (i.e) Vatham, pitham and kabam.

The siddha concepts of pathology of Seetha kazhichal have been described in ‘Thirumoolar Vaidhyam’ karukkidai 600.

“கழிச்சல் கிராணி காணும் விதம்கேளு
அழிச்சிய பித்தம் அலைவாதம் ஐயமாம்
செழுச்சிய வாயு சேர்ந்தவை மூன்றால்
பழிச்சென பேதிக்கும் பார் பெலம் போகுமே”

- திருமூலர் வைத்தியம் கருக்கிடை 600

According to siddha system of medicine, diseases are produced due to derangement in in Thridoshas (i.e.,) Vatham, Pitham and Kabam.

In “Seetha Kazhichal” due to various causes stated above, the pitha kuttram is vitiated from its normal condition. This in turn stimulates Abanan, a type vatha. Also, chenneer (blood) and kaba kuttram are affected.

Vitated pitham along with kabam causes ulceration in the intestine and produces passage of loose stools with blood and mucus

Pain in the abdomen and tenesmus are produced mainly due to vitiated vayu. Finally all the trithathus are deranged from their normal positions and produces “Muppini Noi”

Piniyari Muraimai (Diagnosis):

In siddha medicine, diagnosis of a disease is made up on the following principles.

1. Poriyaal arithal (Inspection)
2. Vinaathal (Interrogation)
3. Pulanaal arithal (Palpation)

Pori are the five organs of perception namely nose, tongue, eyes, ears and skin.

Pulan are the five objects of senses namely smell, taste, sight, sensation and sound.

Poriyaal arithal and pulanaal arithal goes hand in hand with concept of examing the patient's pori and pulan with that of the physician's pori and pulan.

By Vinaathal, the physician knows about the patient's name, age, native place, socio economic status, family history, dietetic habits etc. If it is infant or child or unable to talk (deaf and dumb and in other diseased conditions) the particulars are obtained from his/her relatives or parents i.e, informer.

Poriyaalarithal, pulanaalarithal and vinaathal are effected through eight special methods of investigation (Envagai Thervugal)

Envagai Thervugal:

Envagai Thervugal is considered to be physician's instruments.

"நாடி பரிசம் நா நிறம் மொழி விழி
மலம் மூத்திரமிவை மருத்துவராயுதம்" - தேரையர்

- ❖ Naadi (Pulse)
- ❖ Sparisam (Palpation)
- ❖ Naa (Tongue)

- Niram (Colour of Skin)
- Mozhi (Speech)
- Vizhi (Eyes)
- Malam (Stools)
- Moothiram (Urine)

Naadi (Pulse):

Naadi is an important observation for diagnosis and prognosis. Naadi is responsible for the existence of life and can be felt one inch below the wrist on the radial side by means of palpation with the tips of index, middle and ring finger corresponding to vatham, pitham and kabam.

Normally the three humors vatham, pitham and kabam exist in the ratio 1: ½: ¼.

Derangement in these ratio leads to various disease entities and is best diagnosed by feeling the naadi.

Naddi nadai in Seethakazhichal:

“தழைப்பான பித்தத்திலுஷ்ணங் கொண்டால்
ஷயம் அத்திசுரம் வெதுப்புச் சத்தி குன்மம்
கழைப்பான பொறுத்துளைவு அதிசாரங்கள்
கடுப்புடனே வயிற்றுவலி மூலவாயு
இளைப்பாகி யூண்மறுத்தல் நாக்கசப்பு
இரவில் கனவுடனே சங்கார தோடம்
வழைப்பான பயித்தியநோ யெரிவு தாகம்
வந்தணுகில் பலபிணிக்கும் வகையதாமே”

- சதகநாடி

Vitiated pitham with heat produces symptoms of seetha Kazhichal.

“தொந்தித்த சிலேற்பனத்தில் வாய்வு கூடித்

துடர்ந்த குன்மம் நெஞ்சடைப்பு சுவாசகாசம்
வந்தித்த குரல் தனிலே வுறுத்தலீளை
வழுவழுப்பு நீருறல் மலத்தில் சீதம்
வெந்திரதம் கொழுத்தல் குத்துத் திமிர்வியாதி
வீச்சுடேனே வலியெட்டுந் திரட்சை பாண்டு
அந்தித்த குறுகுறுப்பு மயக்கம் விக்கல்
ஆனபல பிணியும் வந்தடறுந் தானே”

- சதகநாடி

Thonthamana kabam with vayu produces motion mixed with mucus.

Naadi Nadai for Grani is also responsible for “Seetha Kazhichal”

“சிறப்பான பித்தத்தில் வாத நாடி
சேரிலுறுந்தாது நட்டமுதர பீடை
உறைப்பாகச் செரியாமைக்குன் மஞ்சூலை
யுற்ற சுரங்கிராணி வயிற்றிரைச்சல் மந்தம்
அறைப்பான ஓங்கார புறநீர்க்கோவை
ஆயாச மிரக்க மொடு மயக்க மூர்ச்சை
முறைக்காய்வு விஷ வீக்கம் மூலவாய்வு
முரடான நோய் பலவு முடுகும் பண்பே”

-சதகநாடி

In pitha vatham Naadi, Grani is produced.

When there is aggravated vatha naadi the disease Grani is produced.

“வாதமெனும் நாடியது தோன்றில் வெப்பு
சீதமந்தமொடு வயிறு பொருமல் திரட்சி வாய்வு
சீதமுறுங்கிராணி மகோதரம் நீராமை
திரள் வாய்வு சூலை வலிகடுப்புத் தீரை
நீதமுறுங்கி ருமிகுன்மம் அண்டவாதம்
நிலையும் நீர்க்கிரிச்சரங்கள் தந்து மேகம்
பேதகமா முதரபிணி மூலரோகம்
பேச வெகுபிணிகளுமே பொருளதாமே”

-சதகநாடி

Sparisam (Palpation):

By sparisam, the temperature of skin (heat or cold), smoothness, roughness, Hardness, sweat, dryness, swelling, tenderness, ulcers, and pigmentation can be examined.

In “Seetha Kazhichal” dryness of the body, raised body temperature, tenderness in the abdomen, sometimes liver enlargement is present.

Naa (Tongue):

In the examination of tongue, colour, coating, wetness, or dryness, deviation movements, fissures, variation in taste, condition of teeth and gums are carefully noted.

In “Seetha Kazhichal” coated tongue shows loss of appetite and indigestion.

Niram (Colour):

Colours indicating vatham, pitham, kabam and thridhosas, cyanosis, pallor, yellowish, discoloration of the body are noted.

In “Seetha Kazhichal” pallor of the body is present.

Mozhi (Speech):

In the examination of mozhi, the pitch of voice (high or low), laughing, slurring, speech in hallucination, crying, breathlessness or wheezing and incompleteness while talking may be noted.

In seetha kazhichal mozhi may be affected.

Vizhi (Eye):

Both sensory and motor disturbances are noted. Colour, inflammation, ulceration, lacrimation, sharpness of vision, response of the pupil to light may also be noted.

In the case of seetha kazhichal, sunken eyes and pallor of eyes sometimes noted.

Malam (Faeces):

In the examination of malam, Niram (Colour) Nurai (froth), Erugal (Solid) Elagal (Semi solid or liquid), quantity (increased or decreased), smell can be noted. Other examinations like presence of blood, mucus, undigested matter in the stools and odour can also be noted.

In “seetha kazhichal” the malam may be liquid or semisolid, Bulky or scanty in quantity, bright red or dark brown in colour, sometimes gives offensive odour containing mucus and blood.

Moothiram (Urine):

In the examination of Urine, colour, odour, quantity of Urine, the presence of froth, deposits, blood, and pus, abnormal constituents such as sugar, protein etc. and frequency of urination can be noted.

In “Seetha Kazhichal”, the quantity is slightly diminished and yellow in colour.

Neerkuri:

“வந்த நீர்க் கரியெடை மணம் நுரை எஞ்சலென
றைந்திய லுளவை யறைகுது முறையே”

–சித்த மருத்துவாங்கச்சுருக்கம்

According to this verse, the general features of urine are niram, edai, manam, nurai and enjal.

1. Niram indicates the colour of the urine voided
2. Edai indicates the specific gravity of the urine.
3. Manam indicates the smell of urine voided

4 Nurai indicates the frothy nature of urine voided.

5 Enjal indicates the quantity of urine.

Collection of urine for Neikuri:

“அருந்துமா றிரதமும் அவிரோ தமதாய்
அ.ஃகல் அலர்தல் அகாலவூண் தவிர்ந்தழற்
குற்றளவருந்தி உறங்கி வைகறை
ஆடிக்கலசத் தாவியே காது பெய்
தொருமுகூர்த்தக் கலைக்குட்படு நீரின்
நிறக்குறி நெய்க்குறி நிருமித்தல் கடனே”

-தேரையர்

Prior to the day of examination, the patient is asked to take a regular and balanced diet without any derangement in amount and quality. The patient is allowed to have a good sleep. In the next early morning, the urine first voided is collected in a glass container for analysis.

The analysis should be carried out in one and half hours.

A drop of gingelly oil is dropped into a wide vessel containing the urine and is kept in the bright light in a calm place without shaking. The derangement of three thathus is studied by nature of oil on the surface of urine.

“ அரவென நீண்டிடின் அ.ஃதே வாதம்
ஆழிபோற் பரவின் அ.ஃதே பித்தம்
முத்தொத்து நிற்கின் மொழிவதன் கபமே”

- நோய் நாடல் முதல் பாகம்

Oil spreading like snake indicates Vatham.

Oil spreading like a ring indicates pitham.

Oil remaining floating as a pearl indicates kabam.

Complications:

“உண்டாகும் பேதிதான் உக்கிரமாய்க் கண்டால்
உத்தமனே குடலுக்குள் துவாரங் கண்டு
நன்றான குடல் சவ்வுத் தாபிதமே கண்டு
நிலமான ஈரலில்தான் சீக்கட்டி கொள்ளும்
பண்டான இரணமுலர்ந்து குடற்சுருங்கி னாக்கால்
பளிச்சென்று மலபந்தம் உண்டா மப்பா
சிண்டான சிலேட்டுமச் சவ்வு அழுகிப் போனால்
சிறப்புடனே சுரப்புக் கண்டு இறப்பான் தானே”

- அகத்தியர் குணவாகடம்

From the above verses, it is clear that severe bedhi leads to perforation and inflammation of the colon, liver abscess, constipation and obstruction. Sometimes it may end fatally.

“பாண்டு பிரமேகம் பன்வாத சூலைகுன்மம
வேண்டா ஷயஞ்சன்னி வெண்சோபை- நீண்ட
அதிநீரே காமாலை யானபிணி தம்மு
னதிசாரமா காதறி”

-கண்ணுசாமியம்

If the above diseases are associated with Grani it may lead to a fatal outcome.

“சந்தி விடசோபைசார் குன்மம் நீரிழிவு
துன்னுங் கிராணி சுரம் பேதி பன்னுபிர
மேகம் சயமிவற்றுள் மூச்சு விக்கல் மேல்வீக்கம்
ஆகிலுயிர் போமறி”

- கண்ணுசாமியம்

If the Grani is associated with dropsy, hiccup, dyspnoea, it would be fatal.

Prognosis:

"Seetha Kazhichal" is a curable one with proper medicine at proper time. If it is not treated with proper medicine, it leads to severe discomfort, ulceration of colon causing passage of excessive amount of blood and mucus. Pulse appears weak,eyes become sunken and there is dryness of tongue. Pallor of the body due to excessive loss of blood which leads to muppini. Finally end in fatal condition. (Shanmugavelu 1988, kuppusamy mudaliar 1987)

நோய்க் கணிப்பு விவாதம் (Differential diagnosis):

Seetha kazhichal should be differentiated from other Kazhichal noikal. They are

1) Maantha kazhichal:

"வாந்தி பிராந்தி மூர்சையதாய் வாய்ந்து குரலுஞ் சீணித்துக்
காய்ந்து மேனி வெதுவெதுப்பாய்க் கைகால் குளிர்ந்து வலியுண்டாம்
சேர்ந்து கழியு மலந்தானும் சீர்கெட்டிருக்கும் பலவிதமாய்ப்
போந்த மாந்தக் கழிச்சலிது பொல்லாதெனவே புகன்றனரே"

-பாலவாகடம்

In maantha kazhichal following symptoms and signs were seen.

Vomiting, loss of consciousness, hoarseness of voice, dryness of skin, fever, coldness of limbs, convulsions and different types of loose stools.

2)Kanakazhichal:

"சீதங்கழிய மலங்கழியும் திரும்பிக் கெட்ட பால் போலே
போதக் கழியுங் கறித் தண்ணீர் போலுங் கையுங் கால் குளிர்ந்து
காதையடைக்கும் வெதுப்புண்டாம் கையிற்பிள்ளை தங்காது
கோதாயிந்தக் குணங்கண்டால் குலவுமிதன்பேர் கழிகணமே"

- பாலவாகடம்

In kana kazhichal the following signs and symptoms may be present. Stools may be mucus or bulky or curdy milk or curry water. Coldness of the hands and legs, deafness, fever, restlessness.

Seetha kazhichal should also be differentiated from vatha kazhichal, pitha kazhichal, kaba kazhichal, mukkutra kazhichal and oozhi noi.

Maruthuvam (Treatment):

மூன்றிலொன்று யர்ந்ததை முன்னரறிந்து
முந்தியதனை யொழித்திடு மருந்திடு
தணியும் நோயின் தந்திரமிதுவே
பேணிக் கணித்திடின் பிறவாய் பின் குணம்”

- நோய் நாடல் முதல் பாகம்

In Siddha system of medicine, the principle of treatment is bringing back the vitiated thathus to their normal position. This is clear from the above verses.

Line of treatment:

1. In the disease seetha kazhichal, the vitiated Azhal Kuttram and Keelnokku Kaal should be brought to their normal positions.
2. Specific medicine for arresting the passage of loose stools with blood and mucus.

   A large numbers of medicines are stated in different literatures. Among them an economical and efficacious medicine is **“Atthi Pinju chooranam”**. It is administered with buttermilk three times a day.

   Dose: - 250mg – 1gram (The dose varies with age and adjusted according to the condition of the patient and severity of the disease).

   The method of preparation and other details regarding the medicine are given in Annnexure-1.

பத்தியா பத்தியம் **(Diet regimen):**

In infants breast feeding should be appreciated. It prevents dehydration also.

" இருந்தோஷம் போக்கும் மிகற் கிரிச்சரந் தீர்க்கும்
அருந்து மருந்தினது பாணம் - பொருந்தும்
அஞ்சனத்திற்காகு மறல் வறட்சி நீங்கிவிடும்
பஞ்சினடி மாதர் முலைப்பால்"

-பதார்த்த குணசிந்தாமணி

Cow's butter milk, buffalo's butter milk and goat's milk are useful in "seetha kazhichal" These are stated in the following stanzas.

"வீக்க மகோதர முள் வீறுகுன்மம் பாண்டு பித்தந்
தாக்கு மருந்திட்ட ததிசாரமொடு – கூக்குரலே
மாறத் திரிதோஷ மந்த மணற்றாகம்போம்
வீறாவின் மோருக்கு மெய்"

-பதார்த்த குணசிந்தாமணி

"தாகங் கிராணி கலக்கழிச்சல் காமாலை
ஆகங் குடை புழுவு மற்றுப்போ – மோகமில்லாத்
தேவாமிர்த முமாஞ் சீர் மானிடர் தமக்கு
மூவாமருந்தெருமை மோர்"

-பதார்த்த குணசிந்தாமணி

"வெள்ளாட்டுப் பாலுக்கு மேவிய நற்றீபனமாந்
தள்ளாடு வாத பித்தஞ் சாந்தமாம் - உள்ளிரைப்புச்
சீதமதிசாரஞ் சிலேஷ்ம மறும் புண்ணாறும்
வாத கிலேசமும் போமாய்ந்து"

பதார்த்த குண சிந்தாமணி

Nelpori gangi or nelpori water is useful for "seetha kazhichal". It also prevents dehydration.

“நெற்பொரியைத் தின்றால் நெடுந்தாகம் வாந்தி மந்தம்
மற்பித்தம் வாத மத மூர்ச்சை – பற்பலவாம்
பேதியருசியிவை பேருலகை விட்டொழியும்
சாதிமட மயிலே சாற்று”

-குணபாடம் மூலிகை வகுப்பு

In pararajasekaram, the following stanza mentioned the diet regimen of vayettrulaivu.

“வரகு சோறுட னல்லெண்ணெய் வைத்த நீர்ச் சோறு மோரும்
தரமிகு மிரச வாழை தாங்கிய கனியு நன்றாம்
புரமிகு முசுட்டைக்கீரை பொருந்திய கறியுநன்றாம்
ஊரமிகு மோருங்கூடி யுண்டிடி லுளைவு போமே”

பரராச சேகரம் பாலரோகம்

The following diet should be avoided. These are karamani keerai, kattu parangi leaves, leaves of perum payaru, Agathi leaves, katharikai and fishes.

“காராமணிக் கீரை காட்டுப் பறங்கியிலை
பேராம் பெரும் பயற்றின் பேரிலைகள் - சீரார்
அகத்தியருங் கத்திரிக்காய் ஆயிழையே மீன்கள்
பகைத்ததிக பேதிதரும் பார்”

-பதார்த்த குணசிந்தாமணி

Prophylaxis:

1 Personal hygiene plays a major role in the prevention of the disease “seetha Kazhichal”. Avoiding uncooked or half cooked foods, fruits and vegetables without washing helps in the prevention of disease.

2 Personal hygiene should be maintained.

3 Hand washing before eating, nail cutting, use of foot wears etc.

4 Toilet should be used for defaecation.

5 In infants breast feeding should be appreciated.

REVIEW OF MODERN LITERATURES

Dysentery is an acute inflammation of the large intestine characterized by diarrhoea with blood and mucus in the stools.

Dysentery results from “Entero invasive” micro organisms that penetrate through the mucosa and cause inflammation of intestinal wall. Bacteria, fungi, protozoa and virus play a major role.

Bacteria : Shigella(S.Sonnei,S.Flexneri, S.boydii, S.dysentriae)
E-coli (Enterotoxigenic, Enteropathogenic)
Salmonella
Staphylococcus
Campylobacter

Protozoa : Entamoeba histolytica, Giardia lamblia etc.

Virus : Rota virus, Norwalk and allied viruses.

Dysentery is mainly 2 types;

1) Bacillary dysentery
2) Amoebic dysentery

BACILLARY DYSENTERY BY SHIGELLA (Shigellosis)

Bacillary dysentery is an acute infection of the bowel caused by the organisms belonging to the genus shigella. This disease is more common in infants than in adults.

Shigella is so named after ‘shiga’, who in 1896 isolated the first number of this genus from epidemic dysentery in Japan.

Shigella is non motile gram negative bacilli belonging to the family Enterobacteriaceae and consists of four main pathogenic groups.

1) S.dysenteriae(Group A)
2) S.Flexneri(Group B)
3) S. Boydii(Group C)
4) S.Sonnei(Group D)

The genus is characterized by its ability to invade the intestinal epithelial cells and produce highly potent toxins that irreversibly inhibit eukaryotic cell protein synthesis by a specific enzyme action.

Epidemiology:

Bacillary dysentery is endemic all over the world. It occurs in epidemic form wherever there is a crowded population with poor sanitation and has been a constant accompaniment of wars and natural catastrophes. Epidemics in civilian communities are associated with poverty.

Infection with shigella occurs most often during warm months in temperate climates and during rainy season in tropical climates. Both sexes are equally affected and in endemic among preschool children in tropical countries. It is most common in the second and third year of life.

Infection is rare in first six months. Breast milk, which in endemic areas contains antibodies to both virulence plasmid coded antigens and lipopolysaccharides may partially explain the age related incidence.

S.dysentriae occurred in South India in the years 1974-78 and in the eastern parts of India and Bangladesh in mid 1980's.

S.dysentriae serotype I tends to occur in massive epidemics. It shows special predilection for child population.

Mode of Transmission:

The only source of infection are human beings.The mode of transmission may be as follows;

1) Direct through contaminated fingers-hand to mouth infection(Faeco oral route)
2) Through contaminated water and food or drinks.
3) Through fomites such as door handles;water tapes,lavatory seats
4) Through flies which may transmit the infection as mechanical vectors.
5) Through contaminated water when used to irrigate or wash vegetables.
6) The spread is boosted by the low level of personal hygiene and environmental sanitation level.

Pathogenesis:

Infection occurs by ingestion. The minimum infective dose is low, as few as 10-100 bacilli being capable of initiating the disease, probably because they survive gastric acidity better than other enterobacteria. Their pathogenic mechanisms resemble those of Enteroinvasive E-coli.

The bacilli infect the epithelial cells of the villi in the large intestine and multiply inside them, spreading laterally to involve adjacent cells and penetrating into the lamina propria.

Inflammatory reaction develops with capillary thrombosis, leading to necrosis of patches of epithelium, which slough off, leaving behind transverse superficial ulcers. Bacteremia may occur in severe infections, particularly in malnourished children.

Morphology:

In severe bacillary dysentery, the colonic mucosa becomes hyperemic and edematous, enlargement of lymphoid follicles creates small projecting nodules. Within the course of 24 hours, fibro suppurative exudate first patchily, then diffusely covers the mucosa and produces a dirty grey yellow pseudo-membrane.

The inflammatory reaction within the intestinal mucosa builds up, the mucosa becomes soft and friable and irregular superficial ulcerations appear. If the infection is severe, large tracts may be denuded leaving only islands of preserved mucosa.

Histologically, there is predominantly mononuclear leukocytic infiltrate within the lamina propria, but the surfaces of the ulcers are covered with an acute, suppurative, neutrophilic reaction accompanied by congestion, marked edema, fibrin deposition and thrombosis of small vessels.

Incubation period:

The incubation period is generally between 2-7 days.

Clinical features:

After ingestion of shigella there is an incubation period of several days before symptoms ensue. Characteristically severe abdominal pain, high fever, emesis, anorexia, generalized toxicity, urgency and painful defaecation occur.

The diarrhoea may be watery and large volume initially evolving into frequent small volume bloody mucoid stools. Physical examination may show abdominal distension and tenderness, hyperactive bowel sounds and a tender rectum on digital examination. Chronic diarrhoea is uncommon except in malnourished infants. Only about 10% patients have diarrhoea persisting for more than 10 days.

Neurological findings are among the most common extra intestinal manifestation of bacillary dysentery occurring in as many as 40% of hospitalized infected children.

They are,

- Convulsions
- Lethargy
- Head ache
- Confusion
- Nuchal rigidity
- Hallucination

The cause of neurological findings is not known.Hypocalcemia and hyponatraemia may be associated with seizures in a small number of patients. Most important complication is dehydration with its attendant risk of renal failure and death.

Complications:

Significant complications are dehydration, convulsions, Haemolytic uremic syndrome, sepsis, Disseminated intravascular coagulation, rectal prolapse, toxic megacolon, pseudo membranous colitis, cholestatic hepatitis, conjuctivits, iritis, corneal ulcer, arthritis, Reiter's syndrome, cystitis, myocarditis and vaginitis.

Diagnosis:

Essentials of diagnosis:

Abdominal colic with bloody diarrhoea

Fever and malaise

Faecal leucocytes

Peripheral blood leucocytosis

Isolating the bacillus from faeces

Stool culture is considered to be the golden standard

Rectal swab

Examination of stools:

Macroscopic examination:

The macroscopic appearance of the stool will assist in the diagnosis. The colour of the faeces is often pink, with no foul smell, blood and mucus intimately mixed.

Microscopic examination:

Microscopically there are plenty of cellular exudates, bacteria, swollen polymorphonuclears with distinctive ring like nuclei, red cells and macrophages. Bacteriological cultures should be obtained as a routine in centres where such facilites exist.

Fresh faeces should be inoculated without delay or transported in a suitable medium such as sach's buffered glycerol saline, Ph 7-7.4 for culturing, selective media like s.s.agar, Xyloselyseine-deoxycholate (XLD) agar or Hekton enteric (HE) agar is used.

Indentification is confirmed by slide agglutination with polyvalent and monovalent sera.

Fluorescent antibody technique has been employed for the direct identification of shigellae in faeces but it is complicated by antigenic cross actions and non specific fluorescence.

Prognosis:

This is usually good except in young and debilitated infants and those with septicemia.

Prevention:

As bacillary dysentery is exclusively human infection transmitted by faeco-oral route, control consists essentially in improving environmental sanitation. Health education with an emphasis on washing hands with soap after each defaecation is of paramount importance.

Decontamination of water supplies, use of sanitary latrines, protection of food preparation and its storage can all reduce the primary and secondary transmission of shigella.

Breast feeding decreases the risk of symptomatic shigellosis and lessens its severity in infants who acquire infection despite breast feeding.

Meticulous attention to standards of personal hygiene and supervision of hygiene in young children are necessary for the prevention and control of Institutional out breaks of shigellosis.

AMOEBIASIS –AMOEBIC DYSENTERY BY ENTAMOEBA HISTOLYTICA

Infection with protozoa, Entamoeba histolytica is the major parasitic infection in causing mortality and morbidity. The incidence is 20% less as compared to the adult. Protozoan infection of the intestine cause a wide variety of clinical symptoms ranging from asymptomatic carrier state to severe disease associated with pathological lesion in the gastrointestinal tract.

Distribution:

Human infection with Entamoeba histolytica is prevalent world wide. Endemic foci are particularly common in tropics and areas with low socio-ecnomic and sanitary standards.

WHO report about 10% of the world population is affected by E.histolytica.

Etiology:

Entamoeba histolytica is the only pathogenic organism of amoebic dysentery. The organism can exist in nature as a cyst or a trophozoite. Cysts are oval or round, asymmetrical with four nuclei. They are easily destroyed by most disinfectants and by heating to 55^0C but may survive chlorination of water and in water at low temperature.

Five other species of non pathogenic amoeba may infect the human gastrointestinal tract. They are Entamoeba hartmanni, Entamoeba gingivalis, Entamoeba moshkovskii and Entamoeba polecki.

Epidemiology:

The prevalence of amoebic infection world wide varies from 5 to 81% with highest frequency in tropics. Humans are the major reservoir.This infection is associated with 500 million of cases symptomatic diseases and an annual mortaility of 40,000 to 1, 00,000 deaths per year.

Amoebic dysentery due to invasion of Intestinal mucosa occurs in 1-17% of infected subjects. Dissemination of the parasite to internal organs is less common in children than adults. The pattern of infection varies in different parts of world.. Infection acquired in India, Mexico, Durban and South Africa is apparently more virulent than that from other location.

Although 50-90% of population in tropics and subtropical countries harbor infection, few only suffer.

Mode of Transmission:

Transmission is by faeco-oral route. Food and drinks contaminated with Entamoeba histolytica cysts are the most common means of infection.

Untreated water, human faeces used as fertilizers are the important source of infection.

Food handlers carrying amoebic cyst play a role in spreading the infection. Since cyst survive for over 45 minutes under the finger nails, it is easy to imagine extensive spread of infection.

Raw vegetable irrigated by contaminated water convey infection.

Epidemic outbreaks can occur in institutions such as mental hospitals and schools.

Vectors:

Flies, cockroaches and rodents are capable of carrying the cysts and contaminating foods and drinks.

Incubation period:

About 3-4 weeks.

Habitat:

Trophozoites of E.histolytica live in the mucous and submucous layers of the large intestine of man.

Pathogensis:

Pathogenic lesions caused by E.histolytica are included into two heads,

1. Primary or intestinal lesion

2. Secondary or Metastatic or Extra intestinal lesions.

When the amoeba attaches to the colonic epithelium, lyse colonic epithelial cells and invade the bowel wall. Amoeba proteins that may be involved in tissue invasion include,

1. A lecithin on the surface of parasite, that binds to the carbohydrate on the surface of colonic epithelial cells.

2. A channel forming protein that contains an amphipathic helix that induces pores in the plasma membrane of colonic epithelial cells and lyses them.

3. Cysteine proteinases which are able to break down proteins of the extra cellular matrix.

Intestinal lesion:

Cysts of E.histolytica are the infective form of the organism that resists environmental conditions. Once ingested, the organism encysts in the lumen

of the lower small intestine and the other form, trophozoite is liberated. The trophozoite penetrate the mucous membrane in regions of maximal fecal stasis i.e. caecum, ascending colon, and rectosigmoid colon.

The amoeba fanout laterally to create a flask shaped ulcer with a narrow neck and base. As the lesion progresses, the overlying surface mucosa are deprived of its blood supply and sloughs formed. The earliest amoebic lesion show neutrophilic infiltrate in the mucosa, which later develop into ulcers which contain few host inflammatory cells and areas of extensive liquefactive necrosis. The mucosa between the ulcers is often normal or mildy inflammed. As uncommon lesion is the amoeboma, a napkin like constrictive lesion which represents a focus of profuse granulation tissue response to the parasite and it is sometime mistaken for a colonic tumour.

Extra intestinal lesion:

About 40% of patients with amoebic dysentery, parasites penetrate portal vessels and embolize to the liver to produce solitary or less often multiple discrete abscesses.

Amoebic liver abscesses have a scanty inflammatory reaction at their margins and shaggy fibrin lining. Because of haemorrhage into the cavities, the abscesses are sometimes filled with a chocolate coloured, odourless, pasty material. As it enlarges they produce pain by pressing the liver capsule and can be visualized, by ultrasound.

Metastatic lesion in other organs includes pulmonary amoebiasis, cutaneous amoebiasis, spleenic amoebiasis and brain amoebiasis.

Clinical Features:

The disease may occur as an acute or chronic illness and symptoms may vary from mild gastric upsets to acute fulminant types of dysentery. The most common clinical manifestions are due to local invasion of the intestinal epithelium and dissemination to the liver.

Intestinal amoebiasis:

1. Asymptomatic infection
2. Acute or subacute or recurring dysentery
3. Chronic amoebic dysentery
4. Acute surgical amoebiasis

Extra intestinal amoebiasis:

1. Amoebic liver abscess
2. Amoebic hepatitis
3. Vague recurrent abdominal pain
4. Asymptomatic cyst passers

Intestinal amoebiasis:

Intestinal amoebiasis may occur within 2 week of infection or be delayed for months. The onset is usually gradual with colicky abdominal pain and frequent bowel movement (5-8 movements /day). Diarrhoea is frequently associated with tenesmus. Stools are blood stained and contain fair amount mucus with few leucocytes. Fever documented in only one third of cases. Tenderness along the colon, usually more marked over the caecum and pelvic colon.

1 .Asymptomatic infection:

Most of the infected individuals are asymptomatic and cysts are found in their faeces.

2. Acute or subacute or recurring dysentery:

The acute type of illness is sudden in onset with vomiting and diarrhoea and passage of blood and mucus. Blood when present is usually separate, being seldom mixed with mucus or faecal matter. The sub acute cases mimic picture of ulcerative colitis.

3. Chronic amoebic dysentery:

Chronic amoebic dysentery is common in patients with anaemia (due to blood loss from intestinal haemorrhage), prostrations, emaciation, dehydration and edema due to protein malnutrition. These children have recurrent episodes of dysentery and become irritable, wasted and their growth is interfered. A significant proportion of kwashiorkor cases with loose dysentric stools have shown amoebae.

4.The acute surgical amoebiasis:

These cases with partial or complete intestinal obstruction perforation or peritonitis and intussusception are encountered infrequently. Rectal ulcer and fistula formation or prolapse of rectum are important features.

Extra intestinal amoebiasis:

1) Amoebic abscess of liver:

It constitutes the most important complication, though less frequent in children. The onset is ofen insidious but the presence of fever, rigor, night sweats, weight loss and upward enlargement of liver indicates the development of abscess.

Fluroscopy may reveal an elevated and immobile right hemidiaphragm. Aspiration of the abscess may yield a thick chocolate coloured material in which E.histolytica are rarely found because amoebae primarily localize in the wall of the abscess cavity.

2) Amoebic hepatitis:

Liver involvement develops in about 5% of these with amoebic dysentery. Amoebic hepatitis is perhaps met with more frequently among children. There is pain in the right lower chest and liver is enlarged and tender. There may be associated amoebic ulceration of the colon and often the trophozoites may be recovered in the stools or from these lesions. The association of hepatomegaly along with the detection of E.histolytica in stool and the response to therapy is considered sufficient for the diagnosis of amoebic hepatitis.

3) Vague recurrent abdominal pain:

Cases of vague recurrent abdominal pain in childhood without diarrhoea have sometimes been found due to amoebiasis. This is on the basis of finding the amoebae in the stools and the exclusion of the other more common causes of abdominal pain in childhood and finally by the response to specific therapy.

4) Asymptomatic cyst passers:

Asymptomatic cases may have acquired the infection without any overt symptoms of the disease. They constitute a potential danger to the community but fortunately rare among children.

Complications

Amoeboma

Toxic megacolon

Extra Intestinal Extension to liver, lung, spleen and brain

Local perforation

Peritonitis

Diagnosis:

Essentials of diagnosis:

Diarrhoea with blood and mucus

Evidence of colitis

Pain and tenderness

Detecting the organism in stool samples for trophozoites and cysts.

Sigmoidoscopy

Endoscopy and biopsy when stool samples are negative.

Indirect haemagglutination test

Examination of stools:

The diagnosis of amoebic colitis is established by examination of wet mounts of the stool specimen. The pre-requisites for obtaining a greater number of positive results are

1) Stools must have been freshly passed and the bloody or mucoid portion should be picked out for microscopic examination.

2) More number of specimens (Atleast six) should be examined (single stool examination reveals only 1/6 to 1/3 of the total infection)

3) Repeated examination of stools must be done in suspected cases.

Formed stools are microscopically examined initially in saline and iodine mounts for amoebic cysts. If there is any delay in examination of stool, a portion of the specimen may be refrigerated for few hours at 4^0celsius or placed in polyvinylalcohol and 10% formalin**.**

Serological test:

Serologic tests may also be helpful if the stool examinations are inconclusive. Four tests are available. They are indirect haemaggultination assay (IHA), Agar gel diffusion (AGD). ELISA and counter immuno electrophresis (CIEP). Where as IHA tests are persistently positive for upto 10 years after an attack of amoebic colitis, the other tests typically negative within 6 to 12 months of an episode of colitis. Patients with amoeboma are usually seropositive.

Sigmoidoscopy:

Sigmoidoscopy is performed in cases where clinical evidence is strong but stools are negative. The edge of colonic, ulcers are scrapped and examined for the presence of trophozoites.

Barium enema:

It may be required to distinguish other forms of chronic colitis from amoebic dysentery.

Differential diagnosis:

Amoebiasis should be considered in the differential diagnosis of every case of diarrhoea. The commonest condition to be differentiated is bacillary dysentery.

Other conditions like ulcerative colitis, tuberculous enteritis, crohn’s disease, sprue may need to be differentiated.

Prognosis:

With the early detection and good treatment of both the diseases, the prognosis is generally good. The prognosis is less favorable in the case of ruptured liver abscesses and amoebic abscess of brain (this is rare in adults and children)

Prevention:

- Eradication of vectors such as houseflies. Hygenic practices such as keeping food covered, filtration and boiling water etc.
- Avoiding consumption of raw vegetables can reduce the incidence of amoebiasis.
- Those cooking for large number of people must periodically undergo stool examinations for detecting asymptomatic cyst passers who are the reservoirs of infection.
- Proper sanitary disposal of human excreta
- Maintaining good personal hygiene like hand washing with soap after defaecation.

These factors are effective in the prevention of disease.

Differences between amoebic and bacillary dysentery

S.N		Amoebic Dysentery	Bacillary dysentery
1	Epidemiology	Chronically endemic (Occasionally epidemic)	Acute epidemic disease (occasionally endemic)
2	Incu. period	Variable	A week or less
3	Onset	Often insidious, poor health prior to attack	Oftenacute, even explosive or hyperacute, good health prior to attack.
4	Age	Rare in children (But becoming frequent)	Common in children
5	Course	Chronic and prone to remissions and exacerbation	Acute (Few days)
6	Symptoms and signs	Tenesmus not so marked, thickening of colon, ascending and transverse colon	Severe tenesmus due to rectum being involved frequently. No thickening of colon.
7	Dehydration, prostration	Not marked	Well marked
8	Complicatio-ns and outcome	Liver abscess or hepatitis surgical amoebiasis including perforation. Fatal outcome due to exhaustion, liver abscess or intestinal haemorrhage.	Due to exhaustion, dehydration and toxemia.

Difference between amoebic and bacillary stools

S.No	Amoebic Stools	Bacillary Stools
1	Naked eye An appreciable amount of faecal matters	Very little fecal matter - chiefly exudates
2	Blood appears dark brown “Altered”	Blood bright red
3	Peculiar characteristic foul smell	No foul smelling
4	Acid to litmus	Alkaline to litmus
5	Microscopy An appreciable amount of faecal matter	Chiefly exudates
6	RBC tend to be clumped	RBC discrete
7	Pus cells and macrophages virtually absent E.H.Veg present	The presence of pus cells and macrophages are characteristic feature
8	Common intestinal bacteria seen in wet preparation	No bacteria seen in wet preparation
9	Flagellates commonly seen	Flagellates usually absent.
10	Charcot leydon crystals often present	Charcot leydon crystals not a feature.

MATERIALS AND METHODS

The clinical study on seetha kazhichal was carried out in the out-patient and in-patient department (postgraduate) of kuzhanthai maruthuvam at government siddha medical college palayamkottai.

Selection of cases

Twenty cases of both sexes 12 male,8 female in the age group between 3 years to twelve years were selected from the out patient department and admitted in the post-graduate kuzhanthai maruthuvam ward. The diagnosis was confirmed by clinical and laboratory criteria.

Study of siddha clinical diagnosis

The following siddha methods of diagnosis were employed: poriyalarithal, pulanaalarithal, mukkutra nilai, ezhu udal thathukkal, envagai thervugal, neerkuri, neikuri etc.,

Evaluation of clinical parameters:

During admission the patients had passage of loose stools frequently. The loose stools were often mixed with blood and mucus and associated with lower abdominal pain and tenesmus.

Patients having signs of severe dehydration and in need of emergency care were excluded from this study.

Clinical investigations:

Stools examination:

Stools were examined macroscopically for Niram(colour), Nurai(froth), Erugal(solid), Elgal(semisolid or liquid) and microscopically for ova, cyst, trophozoites of entamoeba histolytica, occultblood, culture for shigellasp etc.

Routine blood and urine examinations were done for all cases.

Case proforma:

All clinical signs and symptoms of seetha kazhichal, history of present and past illness, personal history, nutritional history, family history, immunizational history, laboratory investigations and management methods were systemically recorded in a proforma for analysis.

Administration of trial medicine:

The trial medicine used in the study is "**Atthi Pinju chooranam**". Preparation and properties, biochemical analysis, pharmacological studies and antibacterial activity of the drug are dealt in detail in annexures.

RESULTS AND OBSERVATIONS

Results were obsevered with regard to the following features:

1. Age distribution
2. Sex distribution
3. Religion distribution
4. Socio economic status
5. Food habits
6. Kaalam
7. Paruvakaalam
8. Thinai
9. Aetiological factors
10. Duration of illness
11. Clinical presentation
12. Signs and symptoms
13. Reference to mukkutram
14. Ezhu udal kattugal
15. Envagai thervugal
16. Haemotological profile.
17. Microscopic examination of stool and culture.
18. Inpatient case report.

Table: 1 Age Distribution

S.No	Age and paruvam	No of cases	Percentage
1	1-6 months kappu paruvam	-	-
2	6-12 months senkeeraiparuvam	-	-
3	1- 1½ years Thalattu paruvam	-	-
4	1½-2 years sappani paruvam	-	-
5	2-2½ years mutham paruvam	-	-
6	2½-3 years varugi paruvam	1	5%
7	3-3½ years Ambuli paruvam	2	10%
8	3 ½-4years chitril paruvam	-	-
9	4-4 ½ years Siruparai paruvam	1	5%
10	4½ – 5 years siruther paruvam	1	5%
11	5-6 years Pethai (female) Pillai (Male)	2	10%
12	6-12years pethumbai (Female) Siruparuvam (male)	13	65%

Among the 20 cases 65% of cases in the age group of 6-12 years, 15% in the age group of 3-4 years and 20% in the age group of 4-6 years.

Table: 2 Distribution of sex

S.No	Sex	Percentage	No of cases/20
1	Male	60%	12
2	Female	40%	8

Out of 20 patients 12 were male children and 8 were female children.

Table: 3 Religion Distribution

S.No	Religion	No of cases/20	Percentage
1	Hindu	18	90%
2	Christian	2	10%
3	Muslim	-	-

Out of 20 cases 90% belonged to Hindu and 10% cases belonged to Christian.

Table: 4 Socio economic status

S.No	Socio Economic Status	No of cases/20	Percentage
1	Poor	16	80%
2	Middle	4	20%
3	Rich	-	-

Out of 20 cases 80% cases belonged to poor socio economic status and 20% of cases belonged to middle class.

Table: 5 Distribution according to food habits

S.No	Food Habits	No of cases/20	percentage
1	Vegetarian	3	15%
2	Mixed	17	85%

According to food habits 85% of cases had mixed diet and 15% had vegetarian diet.

Table: 6 Distribution according to kaalam

S.No	Kaalam	No of cases /20	Percentage
1	Vatha Kaalam	20	100%
2	Pitha kaalam	-	-
3	Kaba kaalam	-	-

100% cases were from vatha kaalam because the clinical study was carried out in children under the age of 12.

Table: 7 Distribution according to paruva kaalam

S.No	Paruva kaalam	Month	No of cases/20	Percentage
1	Kaar kaalam	Aavani& purattasi	9	45%
2	Koothir kaalam	Iyppasi& karthigai	-	-
3	Munpani kaalam	Markazhi & thai	-	-
4	Pinpani kaalam	Maasi & Panguni	-	-
5	Elavenil kaalam	Chitrai & vaigasi	4	20%
6	Muthuvenil kaalam	Aani & Aadi	7	35%

45% of cases were recorded in Kaar kalam, 20% of cases in Elavenil kaalam and 35% of cases in Muthuvenil kaalam.

Table: 8 Distribution according to thinai

S.No	Thinai	No of cases/20	Percentage
1	Kurungi(Hill)	-	-
2	Mullai(Forest)	-	-
3	Marutham(Fortile)	20	100%
4	Neithal(Coastal)	-	-
5	Palai(Desert)	-	-

100% of cases came from"marutha nilam".

Table: 9 Aetiological Factors

s.no	Aetiological factor	No of cases/20	Percentage
1	Bottle feeding	-	-
2	Drinking impure water	13	65%
3	Intake of excessive pungent and sour tasted food	5	25%
4.	Intake of contaminated food items	8	40%
5	Lack of personal hygiene	13	65%

Drinking impure water constitute 65%, intake of contaminiated food items constitute 40%, intake of excessive pungent and sour tasted food constitute 25% and lack of personal hygiene constitute 65% of cases.

Table: 10 Duration of illness

S.No	Duration of illness	No of cases/20	Percentage
1	1 day	2	10%
2	2 days	11	55%
3	3 days	5	25%
4	4 days	2	10%

10% cases were suffering for 1 day, 55% cases for 2 days, 25% of cases for 3 days and 10% of cases for 4 days.

Table: 11 Clinical presentation

S.No	Signs and symptoms	No of cases/20	Percentage
1	Passing bright red scanty loose stools with mucus and blood	14	70%
2	Passing dark brown scanty loose stools or semisolid stools with mucus and blood	6	30%
3	Indigestion	20	100%
4	Abdominal discomfort	20	100%
5	Flatulence	18	90%
6	Abdominal pain	20	100%
7	Raised body temperature	7	35%
8	Rectal tenesmus	18	90%
9	Post prandial evacuation of bowels	6	30%
10	Tenderness over caecal region and ascending colon	8	40%

11	Tenderness over transverse colon	5	25%
12	Tenderness over descending colon	7	35%
13	Tenderness and enlargement of liver	-	-
14	Nausea and vomiting	6	30%
15	Incessant cry	1	5%

THE NATURE OF SIGNS AND SYMPTOMS

Interrogation:

Out of 20 cases, 70% cases passed bright red scanty loose stools mixed with blood and mucus for about 5 to 10 times a day. 30% passed dark brown scanty loose stools with blood and mucus 2 to 5 times a day. Almost the cases had abdominal pain, abdominal discomfort and indigestion.90% had flatulence and rectal tenesmus. 30% had nausea and vomiting, 30% had post prandial evacuation of bowels and 5% of children had incessant cry.

Inspection:

In all the patients, the general contour of the abdomen was normal respiratory movements. No visible peristaltic movements. No distended veins. The umbilical and hernial sites were in normal position.

Palpation:

40% of cases had tenderness over caecal region and ascending colon. 35% of cases had tenderness over descending colon. 25% of cases had tenderness over transverse colon. 35% of cases had raised body temperature.

Percussion:

There was no fluid and shifting dullness in all cases.

Table: 12 Incidence of patients with seetha kazhichal according to mukkutrangal

S.No	Mukkutram	No of cases/20	Percentage
	Vatham		
1	Piranan	-	-
2	Abanan	20	100%
3	Uthanan	6	30%
4	Viyanan	20	100%
5	Samanan	20	100%
6	Naagan	-	-
7	Koorman	-	-
8	Kirukaran	20	100%
9	Devathathan	-	-
10	Dhanjeyan	-	-
	Pitham		
1	Analam	20	100%
2	Ranjagam	6	30%
3	Saathagam	-	-
4	Pirasagam	6	30%
5	Aalosagam	-	-

	kabam		
1	Avalambagam	20	100%
2	Kilethagam	20	100%
3	Pothagam	-	-
4	Tharpagam	-	-
5	Santhigam	-	-

According to vatham, in 100% of cases abanan, samanan, viyanan and kirukaran were deranged. Uthanan was deranged in 30% of cases. With reference to pitham analam was deranged in 100% of cases. Ranjagam and pirasagam were affected in 30% of cases. As per kabam 100% of cases had deranged Avalambagam and kilethagam.

Table: 13Ezhu udalkattugal of patients with Seetha kazhichal

S.No	Udal kattugal	No of cases/20	Percentage
1	Saaram	20	100%
2	Senneer	20	100%
3	Oon	-	-
4	Kozhuppu	-	-
5	Enbu	-	-
6	Moolai	-	-
7	Sukkilam/Suronitham	Not applicable	

Saaram and senneer were affected in 100% of cases.

Envagai thervugal

Among 20 cases, the Envagai thervugal were observed as follows.

1. Naa

Coated and slightly dried tongue was observed in 15 patients (75%)

2. Niram

6 patients were slightly pale.others were normal in colour (30%)

3. Mozhi

There was no change to mozhi in all the cases

4. Vizhi

The conjunctiva was pallor in 6 cases (30%)

5. Sparisam

7 cases (35%) had raised body temperature

6. Malam

6 patients (30%) were passing dark brown copious loose stools containing blood and mucus, offensive odour with frequency of 2 to 5 times a day.

14 patients (70%) were passing loose bright red scanty stools with blood and mucus 5 to 10 times a day.

Moothiram:

Burning micturation was observed in 4 patients (20%) yellow coloured urine in 3 cases (15%) and normal urine in 13 cases (65%)

Naadi

In 13 patients (65%) pithavatha naadi was felt and kaba vatha naadi was felt in 7 cases (35%)

Table: 14 Neikuri reference of urine obtained from patients with seetha kazhichal

S.No	Neikuri reference	Character of urine	No of cases/20	Percentage
1	Vathaneer	Spreading like snake	5	25%
2	Pithaneer	Spreading like ring	13	65%
3	Kabaneer	Spreading like pearl	2	10%

In neikuri, 65% of patients showed pithaneer and 25% of patients showed vathaneer and 10% of patients showed kabaneer.

Table: 15 Haematological profile in patients with seetha kazhichal

S.No	Haemoglobin content (%)	No of cases/20	Percentage
1	Upto 55	3	15%
2	55 to 60	3	15%
3	60 to 65	6	30%
4	65 to 70	6	30%
5	above 71	2	10%

Haemoglobin content was upto 55% in 3 cases (15%), 55% to 60% in 3 cases (15%), 60 to 65% in 6 cases (30%), 65 to 70% in 6 cases 30% and above 71 in 2 cases (10%)

Table: 16 Erythrocyte sedimentation rate (ESR/hour)

S.No	ESR/hr	No of cases/20	Percentage
1	1-10 mm	3	15%
2	11-20 mm	8	40%
3	21-30 mm	5	25%
4	31-40 mm	4	20%
5	41-50 mm	-	-

In 3 cases (15%) ESR was between 1-10 mm

In 8 cases (40%) ESR was between 11-20 mm

In 5 cases (25%) ESR was beween 21-30 mm

In 4 cases (20%) ESR was between 31-40 mm

Table: 17 Total leucocyte count/cu.mm

S.No	Total leucocyte/cu.mm	No of cases/20	Percentage
1	6000-8000	6	30%
2	8000-10000	11	55%
3	10000-12000	3	15%

Total leucocyte count was between 6000-8000 in 6 cases (30%), 8000-10000 in 11 cases (55%) and 10000-12000 in 3 cases (15%)

DISCUSSION

Seetha kazhichal is a common pediatric problem. This disease has been clearly described in several siddha texts. Seetha kazhichal mostly resembles both bacillary and amoebic dysentery in modern aspects.

In this study several cases were treated at the out-patient P.G.Kuzhanthai Maruthuvam department at Government siddha Medical College, Playamkottai and 20 cases were treated at the In-patient ward of the above department, according to clinical features mentioned in siddha texts. Siddha methods of diagnosis were carried out and recorded in proforma with the help of modern investigations. The diagnosis were confirmed and treated with trial drug "**Atthi pinju chooranam**" and clearly observed. The observations are discussed here.

Incidence with reference to age:

Out of the 20 cases, 13 cases were between 6 -12 years, 3 cases were between 3-4 years and 4 cases were between 4-6years.

Incidence with reference to sex:

Among 20 cases, 12 were male children and 8 were female children

Incidence with reference to socioeconomic status:

Most of the patients (80%) belonged to poor socio economic status and 20% of patients belonged to middle cases.

Distribution according to food habits:

According to food habits 85% of patients have mixed diet.

Distribution according to Mukkuttra kalam:

According to siddha texts, Vathakalam constitutes 1-33 years of age. Hence all the cases selected for this study came under Vathakalam. But seetha kazhichal is a pitha disease.

In neikuri reference of urine from seetha kazhichal patients, 65% showed pithaneer which supports the seetha kazhichal disease as a pitha disease.

Incidence with refernce to paruva kaalam:

According to this study, the incidence of seetha kazhichal during karkaalam was 45%. This finding coincides with the siddhar's view that pitha is vitated during the months of Aavani and purattasi.

Incidence with reference to thinai:

All the cases in this study were from marutha nilam.This point slightly deviates from the concept of siddha, that people of marutha nilam should be free from diseases. This may be due to urbanization, industrialization, pollution, increasing population and lack of personal hygiene etc.

Incidence with reference to Aetiological factors:

Considering the aetiological factors for the disease seetha kazhichal both siddha and modern literatures mainly point out the incidence of micro organisms. This is evident from the observations and results that drinking contaminated water constitutes about 65%, intake of contaminated food items constitutes about 40% and lack of personal hygiene about 65%.

Incidence with reference to mukkuttram:

With reference to siddha texts mukkuttram were analysed in the following pattern.

Vatham

All the 20 cases showed derangement of abanan, viyanan samanan and kirukaran that produced loose stools, rectal tenesmus, abdominal discomfort etc. Udhanan was deranged in 30% of cases which produced nausea and vomiting.

Pitham

All the patients showed the derangement of analam which produced loose stools with blood and mucus. In 30% of patients ranjagam and prasagam were affected which produced pallor of the skin.

Kabam

Derangement of Avalambagam and kilethagam in all cases produced loose stools with mucus and indigestion.

Incidence with reference to Ezhu udal kattugal:

Saaram and senner were affected in all 20 cases which produced symptoms like loose stools with blood and mucus and anaemia.

Envagai thervugal

According to this, Naa was affected in 75% of cases (Coated and dryness). Niram and vizhi were affected in 30% of cases. Sparisam was affected in 35% of cases (Fever)

Malam was affected in all 20 cases (100%) (loose stools with blood and mucus) and moothiram was affected in 35% of cases (burning micturition and yellow colour urine)

In Neikuri 65% of cases showed pithaneer and 35% of cases showed vathaneer. The maximum incidence of pitha neer reveals the disease as pitha disease.

Regarding Naadi, 65% of cases had pithavatha naadi and 35% patients had kabavatha naadi. The maximum occurance of naadi was pithavatha naadi, also according to sathaga naadi, pithavatha naadi will be present in seethakazhichal.

Incidence with reference to duration of illness:

Out of 20 cases, 55% of them had complaints for 2 days, 25% of them had complaints for 3 days, 10% of them for 1 day and 10% of them for 4 days.

Incidence with reference to clinical presentation:

All the cases had the symptoms of passing frequent small quantities of stools mixed with blood and mucus, abdominal colic etc. siddha literature furnish us with the above clinical features. This nearly coincides with amoebic and bacillary dysentery mentioned in modern system of medicine.

Among the 20 cases, 70% of patients passed bright red and loose stools with blood and mucus 5 – 10 times a day evidencing bacillary dysentery and 30% of patients passed dark brown semisolid stools with blood and mucus 2–5 times a day with offensive odour evidencing amoebic dysentery.

All the patients had abdominal pain, discomfort and indigestion.

90% of patients had rectal tenesmus and flatulence and 35% had raised body temperature. 30% of patients had nausea and vomiting.

All the patients are advised to attend the out patient ward for further follow up.

Laboratory investigations:-

Routine examination of blood and urine were done. Macroscopical and microscopical examinations of stools were done during admission and

discharge.

Bacillary dysentery is more common in infants and children than amoebic dysentery. Present study also reveals the same (i.e) 70% of cases were due to bacilli and 30% of cases were due to amoeba.

Treatment

If the cases suffering from seetha kazhichal are not timely diagnosed and treated, it will lead to certain complications. They are discomfort, ulceration of colon, pallor of the body due to excessive loss of blood in the stools, weakened pulse, reduced urine output and muppini. In modern system also, the important complications explained are severe thirst, electrolyte loss, prostration, oliguria, anaemia and rectal prolapse etc.,

Inorder to prevent the complications in the patients with seetha kazhichal and to treat the patients, the trial medicine 'Atthi pinju chooranam' was given with butter milk three times a day. The dose of the medicine was adjusted according to the age and weight of the children and severity of the disease.

All the patients were strictly advised to follow pathiyam. They were also advised to follow personal hygiene and other preventive measures. Satisfactory improvement was reported within 2 days of commencement of the treatment. Out of 20 cases signs and symptoms were completely relieved in 70% of cases. Symptoms and signs were reduced in 30% of cases. The results were based on the clinical improvement

Biochemical analysis of the trial medicine

The biochemical analysis of the trial medicine showed the presence of tannic acid, ferric iron, amino acid and trace amount of calcium.

Antimicrobial study on Atthi Pinju chooranam

The antimicrobial study on ‘Atthi pinju chooranam’ showed the significant inhibitory effect of bacterial growth against shigella. Flexneri, E-coli, salmonella typhi which are the common Entero bacterial pathogen, responsible for diarrhoeal disorders.

Pharmacological analysis

The pharmacological analysis of the trial medicine shows Anti diarrhoeal, Styptic, Anti spasmodic, Anti pyretic and acute and chronic Anti inflammatory actions.

All the treated cases were advised to have a follow up and were advised to lead a hygienic way of living, food, environment as mentioned in “Theriyar pini anugavithi vozhukkam”.

SUMMARY

Twenty children with seetha kazhichal, diagnosed clinically and admitted in In-patient ward were observed for clinical diagnosis, laboratory diagnosis and treated with "**Atthi pinju chooranam**"

Clinical diagnosis of seetha kazhichal was done on the basis of clinical features described in Kuzhandhai Maruthuvam, siddha maruthuvam, Noi naadal and Noi muthal naadal thiratu etc.

The etiology and clinical features of seetha kazhichal were correlated with the etiology and clinical features of bacillary and amoebic dysentery.

Dehydrated children, children having lactose intolerance and in need of emergency treatment were excluded for this study.

Siddha system of clinical methods like Envagai thervugal, Neerkuri, Neikuri were carried out in all the patients and recorded.

Routine blood and urine examination were done. Stools were collected from each patient and subjected to analysis, to differentiate amoebic and bacillary dysentery.

The trial medicine Atthi pinju chooranam was given internally 3 times a day with butter milk for the clinical treatment and management of seetha kazhichal. The dosage of the drug is 250mg-1g (The dose of medicine was adjusted according to the age and weight of children and severity of the disease)

The observation made during the clinical study showed that the trial drug Atthi Pinju chooranam was clinically effective for seetha kazhichal.

The Biochemical analysis of the trial medicine showed the presence of

tannic acid, ferric iron, amino acid ,trace amount of calcium.

Antimicrobial study of Atthi Pinju chooranam showed effective inhibitory action against shigella flexneri, salmonella typhi and E.coli.

In pharmacological analysis, the trial medicine had Anti diarrhoeal, Styptic, Anti spasmodic, Anti pyretic and acute and chronic Anti inflammatory actions.

The parents and children were advised to follow the preventive measures and to lead a hygienic life.

CONCLUSION

All the twenty in-patient children and several out-patient children in the P.G.Kuzhanthai maruthuvam department, Govt Siddha Medical College, Palayamkottai with Seetha kazhichal were treated with **Atthi pinju chooranam** at a dose of 250mg-1gm ,3 times a day with butter milk internally.

No adverse effects were noticed during the treatement period.
The trial drug Atthi pinju chooranam is purely herbal, easily available and harmless to children.

The method of preparation is easy and the drugs are easily available.

The drug has got Astringent,Stomachic, Anti microbial (sensitive against shigella flexneri, salmonella typi, Ecoli), Anti diarrhoeal, Styptic, Anti spasmodic, Anti pyretic and acute and chronic Anti inflammatory actions.

Clinical results were found to be good in 70% of cases and moderate results were found in 30% of cases.

Because of the encouraging results clinically, the study may be undertaken with same medicine in a large number of cases and it may throw new lights for the treatment of **“Seetha kazhichal”**

ANNEXURE - I

PREPARATION AND PROPERTIES OF TRIAL MEDICINE

Name of the trial medicine : **ATTHI PINJU CHOORANAM**

Ingredients : Atthi pinju }
Madhulam pinju } Equal part
Vilva ilai }

Preparation of the Trial Medicine :

The drugs are dried. They are powdered well and filtered in a pure cloth and preserved in an air tight container.

Dosage :

250mg-1gm (The dose of the medicine was adjusted according to the age and weight of children and severity of the disease.)

Adjuvant : Butter milk

Indication : Seetha kazhichal.

Reference : Mooligai Marmam 4th part.

Properties of the Ingredients

அத்தி -Ficus glomavata linn

Family name : Moraceae

Synonyms : Atham,Athavu, Udumbaram.

Part used : Pinju

Suvai : Thuvarppu

Thanmai : Thatpam

Pirivu : Enippu

Constituents :

Moisture -13.6%

Carbohydrate-49%

Fat -5.6%

Fibre -17.9%

Silica -0.25%

Phosphorus -0.91%

Tannin -18% (Wealth of India)

Action :

Astringent

Carminative

Stomachic (Glossary of Indian Medicinal Plants)

Gunam :

“மூலக்கி ராணியறும் மூலவிரத் தந்தீரும்
சாலக் கடுப்புந் தரிக்குமோ ! – மாலரவத்
துத்திப் படவல்குற் றேகாய் ! துவர்ப்பையுறும்
அத்திச் சிறுபிஞ் சருந்து”

(அகத்தியர் குணவாகடம்)

மாதுளை -Punica granatum linn

Family name : Punicaceae

Synanyms : Madhulangam, Thadimam,kazhumul.

Part used : Pinju

Suvai : Thuvarppu

Thanmai : Thatpam

Pirivu : Karppu

Constituents :

Tannin	20-22%
Moisture	78%
Protein	1.6%
Carbohydrate	14.5%
Calcium	10%
Magnesium	12%
Phosphorus	70%
Potassium	33%
Sulphur	12%
Vitamin C	14mg/100gm

Extracts of different parts of tree exhibit antibiotic activity and are effective against E.coli, P.aeruginosa, Salmonella and Shigella (Wealth of India)

Action :

Astringent

Stomachic

Anthelmintic (Glossary of Indian Medicinal Plants)

Gunam :

“மலக்கழிச்சல் சீதத்தால் வந்த கழிச்சல்
சுலக்கழிச்சல் சோரியாற் சாரும் - பலக்கழிச்சல்
மாளும் புளிப்பான மாதுளம் பிஞ்சையுண்ண
ஆளும்கண் மாதே ! அறி.”

(அகத்தியர் குணவாகடம்)

வில்வம் - Aegle marmelos linn

Family name : Rutaceae

Synonyms : Sivathurumam, Mathuram, Koovilam.

Part used : Leaf

Suvai : Thuvarppu

Thanmai : Thatpam

Pirivu : Karppu

Constituents :

Alkaloids Aegelin, Marmesin

Crude protein 15.13%

Crude fibre 16.45%

Crude oxide 5.93%

Phosphorus 0.69%

Action :

Febrifuge

Demulcent

Stomachic

The leaf extract of leaves is reported to be active against E.coli.

Aqueous extract of leaves are reported to possess cardiotonic effect.

Alkaloid Aegeline present in leaves are efficaceous in Asthma.

(Wealth of India)

Leaves ,Fruits and roots have antibiotic properties .

(Handbook of Medicinal plants)

The fresh leaf extract is reported to reduce the period of convalescence in patients suffering from cholera and diarrhea.

(Medicinal plants and Raw drugs of India)

ANNEXURE – II

BIO-CHEMICAL ANALYSIS OF ATTHI PINJU CHOORANAM

Preparation of the extract:

5 gm of Atthi pinju Choornam is weighed accurately and placed in a clear 250 ml clean beaker. Then 50 ml of distilled water is added to it and dissolved well. Then it is boiled well for about 10 minutes. Then cooled, filtered in a 100ml volumetric flask and then it was made upto 100ml with distilled water. This fluid was taken for analysis.

S.NO	EXPERIMENT	OBSERVATION	INFERENCE
1.	**TEST FOR CALCIUM:** 2ml of the above prepared extract is taken in a clean test tube. To this 2ml of 4% Ammonium oxalate solution is added.	A white precipitate is formed.	Indicates presence of trace amount of calcium
2.	**TEST FOR SULPHATE:** To 2ml of the above prepared extract 5% Barium chloride solution is added.	Nowhite precipitate is formed.	Absence of Sulphate
3.	**TEST FOR CHLORIDE** The extract is treated with Silver nitrate solution	No white precipitate is formed	Absence of Chloride

4	**TEST FOR CARBONATE:** The substance is treated with conc. Hcl.	No brisk effervessence is formed.	Absence of Carbonate.
5	**TEST FOR STARCH:** The extract is treated with weak iodine solution.	No blue colour is formed.	Absence of Starch
6	**TEST FOR FERRIC IRON:** The extract is treated with glacial acetic acid and potassium forrocyanide	Blue colour is formed.	Indicates of ferric iron
7	**TEST FOR FERROUS IRON:** The extract is treated with conc.Nitric acid and then add ammonim thiocyanate solution	No Blood red colour is formed	Absence of ferrous Iron.
8	**TEST FOR PHOSPHATE:** The extract is treated with ammonium molybdate and conc. nitric acid.	No yellow precipitate is formed.	Absence of Phosphate

9	**TEST FOR ALBUMIN:** The extract is treated with Esbach's reagent	No yellow precipitate is formed.	Absence of Albumin
10	**TEST FOR TANNIC ACID:** The extract is treated with Ferric chloride	Formation of blue black precipitate	Presence of Tannic acid.
11	**TEST FOR UNSATURATION:** Pottassium permanganate solution is added to the extract.	It gets Declourished	Indicates presence of Unsaturated compound
12	**TEST FOR REDUCING SUGAR:** 5ml of Benedict's Qualitive Solution is taken in a test tube and allowed to boil for 2 minutes and then add 8 to 10 drops of the extract and again boil it for 2 minutes and cool it	No colour changes occurs	Absence of reducing sugar
13	**TEST FOR AMMINO ACID:** 2 drops of the extract is placed on a filter paper dried well. After drying, 1% Ninhydrin is sprayed over the same and dried well	Violet colour is formed.	Indicates the Presence of Amino acid.

ANNEXURE - III

ANTI-MICROBIAL (BACTERIAL) ACTIVITY OF ATTHI PINJU CHOORANAM AGAINST shigella flexneri, E.coli, Solmonella. Typhi and Klebsiella

Aim:

To identify the anti-microbial (Bacterial) activity of Atthi pinju chooranam against shigella flexneri, E.coli, Salmonella typhi and Klebsiella.

Medium : Muller Hinton agar

Components of Medium:

Beef extract

Agar

Starch

Casein Hydrolysate

Distilled Water

PH – 7.6

Procedure:

The media was prepared from the above components and poured and dried on a Petri dish.The organism was streaked on the medium and the test drug (1 gm drug in 10 ml of Water) was placed on the medium. This is incubated at 37^0C for one over night and observed. The sensitive Zones were formed around the diluted sample of various sizes.

Result:

The test drug Atthi pinju chooranam was sensitive against Shigella flexneri, E.coli and Salmonella typhi and not sensitive against Klebsiella.

ANNEXURE IV

PHARMACOLOGICAL ANALYSIS OF TRIAL MEDICINE

ANTI DIARRHOEAL STUDY OF TRIAL MEDICINE

Anti diarrhoeal study of trial medicine, Atthi pinju chooranam was done by charcoal meal method in rats.

Preparation of drug:

Atthi pinju chooranam was ground into powder by mortar and pistle and 1gm of powdered drug was dissolved in 10ml of buttermilk.

Procedure:

Four albino rats of uniform weight and size were selected and divided into two groups each having two rats. All the rats were fasted for 48 hours before starting the experiments. The first group was treated as control group and oral administration of distilled water (1ml) was made. The second group of rats was fed by trial medicine, Atthi pinju chooranam at a dose of 100 mg/100 gm of body weight.

After one hour, 0.5ml of 10% aqueous charcoal solution with gum acacia was given orally to all rats of each group by stomach tube.

All the two test group animals were sacrified by chloroform after one hour of charcoal treatment and the distance travelled by charcoal was measured. The measurements were calculated by taking the distance travelled by charcoal from the pylorus upto the maximum distance it has passed in the intestine. The distance travelled by charcoal in experimental and control groups were tabulated.

Inference:

Percentage of the charcoal travel distance in the control group was 91.75%. In group II animals treated with trial medicine, the charcoal travel distance was 59.4%. The trial medicine is confirmed to have Significant antidiarrhoeal activity.

ANTIDIARRHOEAL ACTIVITY OF THE TRIAL MEDICINE ON RATS BY CHARCOAL MEAL METHOD

Group	Dose volume orally /100gm body wt.	Total length of the intestine (cm)	Carbon travelled distance (cm)	% of carbon travelled
Water +charcoal meal	1ml + 1ml	97	89	91.75
Atthi pinju Chooranam +charcoal meal	100mg/1ml	101	60	59.4

STYPTIC STUDY OF TRIAL MEDICINE

Styptic action of trial medicine, Atthi pinju Chooranam was studied on rats.

Procedure:

Four albino rats of uniform size and weight were selected and divided into two groups each having two rats. All the rats were anasthetised with ether. The first group was treated as control and rats in group II were used for experiment with Atthi pinju Choornam.

In control group, each rat was cut open through abdomen so as to expose the liver. Then a portion of the liver was cut by a sterilized scissor which resulted in bleeding. Simultaneously saline was applied over the bleeding area. The excessive blood oozing out from the cut region was removed by using blotting paper. The exact time taken for bleeding to stop was noted.

In experiment group, each rat was made to bleed as the steps followed in control group. But unlike the control group saline was replaced by Atthi pinju chooranam. Trial medicine was applied over the cut region of the liver soon after bleeding starts. The exact time taken for bleeding to stop in experimental group was recorded.

Group	**Average time taken for bleeding to stop (minutes)**
Control	4.55
Atthi pinju Chooranam	3.50

Inference:

The styptic action of trial medicine was confirmed by the lesser time taken to stop bleeding when compared to control group. Thus the trial medicine is said to have Significant Styptic acitivity.

ANTI-SPASMODIC EFFECT OF TRIAL MEDICINE

Antispasmodic effect of trial medicine, Atthi pinju chooranam was carried out in isolated ileum of rabbit.

Preparation of the drug:

1gm Atthi pinju chooranam was mixed with 10ml of buttermilk and 5ml of water.

Procedure:

A rabbit weighing about 1.5kg was selected and starved for 48 hours. But it was allowed to drink water. Then it was sacrified by stunning with a sharp blow below the head, followed by cutting the throat. Soon after, the abdomen was opened to expose the viscera. Then from intestinal loops (clearly Visible) the ileum was dissected out and placed on a shallow glass dish containing warm aerated tyrode solution. The lumen of the ileum was gently rinsed by saline with the help of 10ml pipette.

In fully relaxed state, the ileum was cut into required segments of about 4cm in length. Sutures were made to tie either end of the segments with the help of the needle in such a way that it was suspended in an inner tube of isolated organ bath maintained at 37^0C. The tube is connected with a jar containing nutrient solution supplemented with atropine sulphate at a concentration of 0.25mg/litre. The inner tube thus obtained the nutrient solution was also connected to out let tube as well as oxygen tube. The ileum segment got oxygen by the aeration and fresh solution was filled after every test preceded by the removal of old nutrition solution through the outlet tube.

Acetylcholine stock solution (10µg/ml) was prepared after standardizing the optimum concentration required to contract the tissue. Then trial medicine was given to study the inhibitory effect of acetylcholine induced contractions.

0.2, 0.4, 0.6, 0.8 and 1 ml of acetylcholine were added to inner tube individually and run for 30 seconds at interval of 1 minute to each concentration. The tissue contraction at each concentration was recorded by kymograph.

0.2ml of trial medicine, Atthi pinju Chooranam was added and run for 30 seconds. Without draining the nutrient solution, 0.2ml of acetylcholine was added after one minute and the response was recorded. Then the concentration of trial medicine was increased to 1ml and the same procedure was repeated and the response was recorded.

Inference:

The trial medicine, Atthi pinju choornam was found to have inhibitory action on acetylcholine induced contractions hence it is said to have Anti spasmodic action

ANTI – PYRETIC STUDY ON ATTHI PINJU CHOORANAM

Aim:

To study the Anti-pyretic study of Atthi pinju Chooranam.

Preparation of the test drug:

1gm of Atthi pinju chooranam was dissolved in 10ml of buttermilk. 1ml of this preparation contains 100mg of the test drug.

Procedure:

3 groups of healthy albino rats were taken, each weighs about 100-200gm and divided into three groups, each group consists of 2 rats. All the rats were made hyperthermic by subcutaneous injection of 12% suspension of yeast at a dose of 100mg/100gm of body weight.

10 hours later one group of animal was given the test drug (Atthi pinju Chooranam) at a dose of 100mg/100gm of body weight. The other group received distilled water at a dose of 1ml/rat and kept as control. The last group was given Paracetamol at a dose of 20mg/100gm of body weight and kept as standard.

The mean rectal temperature for 3 groups was recorded at 0hr, 1½hr, 3hrs, and 4½ hrs after the drug administration. The difference between the mean temperature of the control group, standard and the test drug were noted and compared

Tabulation of Result obtained:

		Mean Temperature in centigrade			
		0 Hour	**1½ Hours**	**3 Hours**	**4 ½ Hours**
Control	1 ml of water	36.5	37.5	38	39
Standard	Paracetamol20mg	37.0	36.0	34.5	34
Atthi pinju Chooranam	100 mg/1ml	37.0	36.5	36	35

Inference:

The test drug Atthi pinju Chooranam has moderate Anti-pyretic action.

ACUTE ANTI-INFLAMMATORY STUDY ON ATTHI PINJU CHOORANAM, BY HIND-PAW METHOD

Aim:

To study the acute anti-inflammatory effect of Atthi pinju Chooranam by HIND-PAW method in rats.

Equipment: Plethysmograph

Preparation of the test drug:

1 gm of Atthi pinju chooranam was mixed with 10ml of buttermilk and 5ml of water. The dose 1ml contains 100mg of the test drug.

Procedure:

Six healthy albino rats weighing 100-150 gm were taken and divided into three groups, each consiting of two rats.

First group was kept as control by giving distilled water orally of 2ml/100gm body weight. The second group was given Ibuprofen at a dose of 20mg/100gm body weight. The third group received the test drug, (Atthi pinju Chooranam) at a dose of 100mg/100gm body weight.

Before administration of test drug, the hind-paw volume of all rats was measured. This was done by dipping the hind-paw upto the tibio tarsal junction in a mercury plethysmograph. While dipping the hind-paw, by pulling the syringe piston, the level of mercury in the centre small tube was made to coincide with remark and reading was noted from the plethysmograph.

Soon after measurement, the drug was administrated orally. One hour later, a sub-cutaneous injection of 0.1ml of 1% (W/V) carragenin in water was made into plantar surface of both hind paws of each rat. Three hours after carrageen injection, the hind-paw volume was measured once again. The difference between the initial and the final volume were calculated and compared.

The method is more suitable for studying anti-inflammatory activity in acute inflammation, the values are given below

Group	**Dose (100 gm Body Weight)**	**Mean Initial Reading**	**Mean Final Reading**	**Mean Difference**	**% of Inflammation**	**% of Inhibition**
Water	1 ml	0.65	1.5	0.85	100	-
Ibu brufen	20 mg	0.8	0.85	0.05	6.25	93.75
Atthi pinju Choornam	100 mg	0.8	1.4	0.6	75	25

Inference:

The test drug Atthi pinju Chooarnam has Mild Acute Anti-inflammatory action.

CHRONIC ANTI-INFLAMMATORY EFFECT OF ATTHI PINJU CHOORANAM

Aim:

To evaluate the chronic anti-inflammatory effect of Atthi pinju chooranam in rats by cotton pellets granuloma method.

Materials and method:

Drug preparation:

1gm of Atthi pinju chooranam was suspended in 10ml of distilled water with gum acacia as suspending agent.

Cotton pellet Granuloma method:

Procedure:

Six healthy albino rats of either sex weighing between 80-100 gm were selected and divided into 3 groups each containing 2 rats.

In this procedure the drugs were given daily for 7 days. Before giving the drug, cotton pellets each weighing 10 mg were prepared and sterilized in an autoclave for about one hour under 15 Pounds atmospheric pressure.

On the day of experiment, each rat was anaesthetised with ether to implant 10mg of sterilized cotton pellet subcutaneously in the lower abdomen two on each side after making suitable incision and sutured carefully.

First group was kept as control group by giving distilled water of 2ml/100gm of body weight, to the second group the standard drug Ibuprofen in a dose of 10mg/ 100gm of body weight was given.

The third group of animals was given tested drug Atthi pinju chooranam in a dose of 100 mg/100gm of body weight.

On the 8^{th} day of the experiment, all the rats were sacrificed and cotton pellets found to be surrounded by granulation tissue were removed and dried in hot air oven at 55^0 C-60^0 C.

Results:

The details of the experimental results are shown in the table.

EFFECT ON ATTHI PINJU CHOORANAM

Groups	Dose/100 gram body weight	Pellet weight	Pellet weight of the Granuloma of drugs	Mean difference	% inflammation	% inhibition
Water	1 ml	10 mg	250 mg	-	100	-
Ibu brufen	20 mg/ 1 ml	10 mg	56mg	-	22.4	77.6
Atthi pinju Chooranam	100 mg/ 1 ml	10 mg	150 mg	-	63	37

Inference:

The test drug Atthi pinju chooranam has Mild Chronic Anti-inflammatory action.

ANNEXURE V

LABORATORY DIAGNOSIS OF Shigella sp. and E.histolytica

COLLECTION OF STOOL SPECIMEN:

Fresh stool specimens were collected in a clear, wide mouthed container with tightly fitted lid. Specimens that were mixed with water or urine and specimens taken from patients who have received barium enema, medications containing mineral oil, bismuth, antibiotics, antimarlarial or other chemical substances were considered unsuitable for examination.

Soon after collection, the lid of the container was tightly fitted to maintain adequate moisture. Stool specimens were never been frozen or thawed or placed in an incubator because parasitic forms may deteriorate rapidly.

TEST FOR OCCULT BLOOD (Benzidine test) IN STOOL SPECIMENT FOR BACTERIAL AND AMOEBIC DYSENTRY

The presence of blood in the stool specimens characteristic bacterial and amoebic dysentery was identified by this test.

Stool specimen was mixed with 5ml of water and from which 1ml of emulsified specimen was mixed with 1ml of benzidine reagent. 3% hydrogen peroxide was added. Blue colour reaction indicated the presence of blood in the stools.

STOOL CULTURE for Shigella sp.

Selective culture media must be used to recover the significant species of bacteria from specimens that may harbour a mixture of microorganisms. Variety of culture media (eg.S.S.agar, Hektoen (HE) agar and xylose lysine doxycholate (XLD) agar) containing inhibitors to the growth of normal bowel flora to allow Shigella sp.to grow is available.

In Shigella sp.culture SS agar was used since it contains five times the concentration of bile salts compared with Macconkey agar and is more inhibitory to E.coli.

The specimen from the container was touched by a sterile platinum loop and immediately transferred the inoculum into peptone water tube where it was kept for four to five hours to let the organism multiply. After inoculation the loop was immediately sterilized. The mouth of the tube was flamed before and after the inoculation and plugged with sterile cotton.

The dipped loop from peptone water tube was streaked on the S.S sugar plate in aseptic condition. It was incubated at 37 degree Celsius for 48hrs and the shigellae colonies was seen as colourless colonies after the incubation period. Single colony of Shigella was picked from the S.S agar plate and confirmed by the monospecific high titre sera for Shigella. Biochemical tests were not carried out since SS agar is highly selective media for shigella and high titre sera are more specific to Shigella.

MICROSCOPICAL EXAMINATION OF STOOL SPECIMEN FOR E.histolytica

VISUAL EXAMINATION

Freshly passed stool specimens were visually examined for the presence of barium, oils, or other materials that may render them unacceptable for further processing. Patches of blood or mucus was specifically selected for microscopic study because they may be deprived directly form ulcers or purulent abscesses where the concentration of amoebae may be highest.

PROCESSING OF STOOL SPECIMEN FOR OVA AND PARASITE EXAMINATION

Three preparations were usually done for liquid, soft semisolid stool and formed stool specimen. They are,

1. Direct wet mount
2. Concentrates
3. Permanent stained smears.

The first two preparations were done for rapid detection of intestinal parasites and the third preparation was not done as it is used for permanent mouths for future study on morphology of cysts and trophozoites.

Liquid stool specimen was examined within 30 minutes after collection or semiformed stools within 60 minutes, to detect motile trophozoites. Formed stool, in which trophozites are not expected, was examined upto 24 hours after passage.

1. Direct wet mount:

It was either done by

a) Direct saline mount or by

b) Iodine mount

The saline mount was made by emulsifying a small portion of faecal material in a drop of physiologic saline on a microscope slide and overlayed the mixed with coverslip. The mounts were not too thick or too thin as the parasites may be stained poorly (in iodine mount) in the former and forms low in numbers in later case.Saline mounts were prepared to observe the motility of trophozoites. Protozoan cysts also appeared more refractile in saline mounts than iodine preparations. In iodine mount one percent iodide and (1gm potassium iodide and 15g powdered iodine crystal to 100ml of distilled water) was used. Unlike saline, addition of iodine kill the organisms and therefore impossible to detect motility of amoebae.

Centrifugation of liquid or watery stools were carried out through it may not sediment trophozoites but it can sediment cysts.

Concentration methods:

Concentration methods were employed for the processing of semiformed stools since cysts, trophozoites present in low numbers still be deteched. The two most commonly used methods are

1. Floatation method
2. Sedimentation method

Concentration by sedimentation (formal saline ether) was carried out. In this method small portion of stool specimen was mixed with 10ml of 10% formal saline and sieved by a strainer. From sieved suspension 6ml were

taken in a tube in which 3ml of ether was added. After thorough mixing, it was centrifuged at 3000 rpm/minute. The deposited parasite was transferred to a slide after decanting the supernatant. Microscopically examination revealed the presence of cyst and iodine was used if necessary.

EXAMINATION OF CHARCOT – LEYDEN CRYSTALS FOR AMOEBIASIS

The crystals are particularly present in the stool with the ulcerative conditions of amoebic dystentry. They were diamond or needle shaped crystals when examining the stool for E.histolytica and found to be characteristic for amoebiasis.

ANNEXURE VI

GOVERNMENT SIDDHA MEDICAL COLLEGE

POST – GRADUATE DEPARTMENT

PALAYAMKOTTAI, TIRUNELVELI – 627 002.

Branch IV- KUZHANDHAI MARUTHUVAM.

CASESHEET PROFORMA FOR "SEETHA KAZHICHIAL"

Ward	:	Religion	:
I.P.No	:	Nationality	:
Bed No	:	Date of admission	:
Name	:	Date of discharge	:
Age	:	Diagnosis	:
Sex	:	Result	:
Fathers Name:		Medical Officer	:
Occupation	:		
Income	:		
Address	:		
Informant	:		

Complaints and Duration:

History of Present illness:

History of Previous illness:

Birth History :

1) Antenatal history

2) Perinatal history

3) Neonatal history

Developmental history :

Dietetic history :

Feeding history :

Family history :

Socio economic history :

Immunization history :

General conditions on examination:

Consciousness :

Decubitus :

Nutrition :

Facies :

Skin changes :

Anaemia :

Cyanosis :

Jaundice :

Erythema :

Haemangioma :

Lymphadenopathy :

Clubbing :

Koilonychia :

Jugular Vein pulsation :

Abdominal distension :

Engorge veins :

Pedal Oedema :

Anthropometry :

Height :

Weight :

Head Circumference :

Mid arm circumference :

pulse

Rate/Minute :

Rhythm :

Volume :

Tension :

Character :

Peripheral pulses :

Heart rate :

Respiration

Rate/Minute :

Type :

Character :

Temperature :

Blood Pressure :

Right Left

Upper limb

Lower limb

Congential abnormalities

(if any)

SIDDHA ASPECTS

Nilam:

Kurinchi :

Mullai :

Marutham :

Neithal :

Palai :

Paruvakalam:

Kaar (Aavani – Purattasi) :

Koothir (Iyppasi – Karthigai) :

Munpani (Markazhi – Thai) :

Pinpani (Masi – Panguni) :

Elavenil (Chithirai – Vaikasi) :

Muthuvenil (Aani – Aadi) :

Udal Nilai

Vatham :

Pitham :

Kabam :

Kalappu :

Gunam:

Sathuvam :

Rasatham :

Thamasam :

Mummalam

Malam :

Moothiram :

Viyarvai :

Poripulangal

Mei :

Vaai :

Kan :

Mooku :

Sevi :

Kanmendhriyam:

Kai -

Kaal -

Vaai -

Eruvaai -

Karuvaai -

Pira Uruppukalin nilai:

Iruthayam :

Puppusam :

Eraippai :

Kalleeral :

Manneeral :

Kudal :

Siruneeragam :

Siruneerpai :

Uyir Thathukkal:

Vatham:

Pirannan :

Abanan :

Viyannan :

Uthannan :

Samannan :

Naagan :

Koorman :

Kirukaran :

Dhevathathan :

Dhananjeyan :

Pitha:

Analam :

Ranjagam :

Sathagam :

Pirasagam :

Alosagam :

Kapha:

Avalambagam :

Kilethagam :

Pothagam :

Tharpagam :

Sandhigam :

Udar Thathukkal:

Saaram :

Senneer :

Oon :

Kozhuppu :

Enbu :

Moolai :

Sukkilam/Suronitham :

Envagai Thervugal:

Naa :

Niram :

Mozhi :

Vizhi :

Sparisam :

Malam

Niram :

Edai :

Erugal :

Elagal :

Moothiram

Neerkuri : Neikuri :

Niram :

Edai :

Manam :

Nurai :

Enjal :

Naadi :

MODERN ASPECTS

SYSTEMIC EXAMINATION:

1 Examination of the abdomen :

Inspection :

2 Shape of the abdomen

3 Umblicus – Shape, discharage, inflammation, nodule etc.

4 Movement

5 Pulsation

6 Dilated Veins

7 Hernial orifices

8 Skin

9 Scars and sinuses

Palpation :

1 Tenderness

2 Guarding

3 Rigidity

4 Tumour

5 Organomegaly

Percussion :

1 Fluid thrill

2 Shifting dullness

Ausculation :

1 Bruit

Eamination of other system

Cardio vascular system :

Respiratory System :

Central Nervous System :

Genito urinary System :

LABORATORY INVESTIGATIONS

Motion

Macroscopic

Number :

Amount :

Colour :

Nature :

Reaction :

Microscopic

Ova :

Cyst of E.histolytica :

Trophozoites of E.histolytica :

Occult blood :

Charcot-Leyden Crystals :

Culture :

Blood

Total WBC Count :

Differential WBC Count :

Erythrocyte sedimentation

Rate ½ hr :

1hr :

Hemoglobin percentage :

Urine:

Albumin :

Sugar :

Deposit :

Daily Progress

Date	Symptoms	Medicine

Advice

GOVERNMENT SIDDHA MEDICAL COLLEGE AND HOSPITAL

POST GRADUATE RESEARCH CENTRE

PALAYAMKOTTAI

BRANCH-IV KUZHANDHAI MARUTHUVAM

ADMISSION-DISCHARGE SHEET FOR SEETHAKAZHICHAL

I.P. NO	:	Occupation	:
Bed no	:	Income	:
Ward	:	Nationality	:
Name	:	Religion	:
Age	:	Date of Admission	:
Sex	:	Date of discharge	:
Permanent address	:	Diagnosis	:
Temporary address	:	Results	:
Informant	:	Medical officer	:

CLINICAL PICTURES

S.No	SIGNS&SYMPTOMS	DURING ADMISSION	DURING DISCHARGE
1.	Frequency of Motion		
2.	Nature of Motion		
3.	Tenesmus		
4.	Post prandial evacuation of bowels		
5.	Abdominal pain		
6.	Tenderness		
7.	Incessant cry		
8.	Fever		
9.	Nausea and vomiting		
10.	Others, if any		

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BLOOD REPORT OF 20 PATIENTS WITH SEETHA KAZHICHAL

S.no	I.P no	Name	Age/sex	Blood test												DOA	DOD	No of days treated
				TC/cu-mm	DC			Hb%	ESR mm/hr	TC/cu-mm	DC			Hb%	ESR mm/hr			
					P%	L%	E%				P%	L%	E%					
1	1343	Michael	3/MC	8800	56	40	4	70%	15	8800	56	40	4	70%	14	21.5.07	28.5.07	8
2	1367	Maharasi	3 1/2 FC	7000	62	35	3	65%	24	7000	62	35	3	65%	20	22.5.07	28.5.07	7
3	1368	Selvam	3 1/2 MC	8800	60	34	6	76%	16	8800	60	36	4	76%	14	22.5.07	29.5.07	8
4	1379	Selvi	6/FC	10000	50	32	8	60%	24	9800	50	34	6	65%	20	23.5.07	28.5.07	6
5	1631	Raja	4 1/2 MC	7200	54	40	6	64%	10	7400	56	40	4	60%	10	21.6.07	25.6.07	5
6	1717	Esakki	12/MC	10400	58	40	2	70%	14	10200	56	42	2	70%	14	4.7.07	8.7.07	5
7	1823	Natesan	5/MC	7000	62	35	3	65%	16	7200	62	35	3	65%	14	14.7.07	18.7.07	5
8	1837	Sivaparvathi	11/FC	7400	60	30	10	54%	10	7400	60	35	5	55%	10	17.7.07	20.7.07	4
9	2017	Selvam	12/MC	8000	64	30	6	68%	22	8000	64	30	6	70%	20	7.8.07	9.8.07	3
10	2037	Swathi	10/FC	9200	60	28	12	55%	5	9000	60	34	6	55%	5	8.8.07	10.8.07	3
11	2066	Swathikumari	10/FC	9000	60	35	5	64%	12	9000	62	35	3	65%	10	12.8.07	14.8.07	3
12	2143	Ayiram	12/MC	7500	56	42	2	67%	40	7800	56	42	2	65%	36	23.8.07	25.8.07	3
13	2200	Kaliraj	12/MC	9000	66	30	4	55%	23	9000	64	32	4	55%	20	1.9.07	3.9.07	3
14	2201	Marikumar	11/MC	9400	56	40	4	70%	15	9200	56	42	2	70%	15	1.9.07	3.9.07	3
15	2202	Manikandan	10/MC	9200	60	35	5	72%	30	9200	62	35	3	74%	26	1.9.07	3.9.07	3
16	2203	Muthuselvan	8/MC	10200	58	38	4	60%	14	10000	60	38	2	60%	14	1.9.07	3.9.07	3
17	2284	Mariammal	8/FC	8000	60	28	12	64%	40	8000	62	32	6	65%	34	10.9.07	13.9.07	4
18	2320	Sudha	10/FC	9400	56	40	4	65%	18	9200	60	46	4	65%	18	14.9.07	17.9.07	4
19	2440	Arokyam	7/FC	8800	60	35	5	70%	30	8800	60	35	5	70%	26	29.9.07	3.10.07	5
20	2465	Natarajan	5/MC	8000	54	44	2	58%	24	8200	58	40	2	60%	20	5.10.07	8.10.07	4

IN PATIENT CASE REPORT OF TWENTY CASES FOR THE DISEASE 'SEETHA KAZHICHAL'

S.No	I.P No	Age/Sex	Duration of Illness	Before treatment	After treatment	DOA	DOD	No of days treated	Results
1	1343	3/mc	4	Passing brown scanty loose stools with blood and mucus, abdominal pain, rectal tenesmus, indigestion, abdominal discomfort, post-prandial evacuation of bowel, tenderness over caecum and ascending colon, nausea and vomiting were present	Patient passing formed stools 2 times a day. Abdominal pain, rectal tenesmus, indigestion were relieved. No post prandial evacuation of bowel, No nausea and vomiting	21.5.07	28.5.07	8	Symptoms relieved and discharged
2	1367	3½ /fc	3	Passing brown scanty loose stools mixed with blood and mucus, abdominal pain, rectal tenesmus, indigestion, abdominal discomfort, tenderness over caecal and ascending colon, nausea and vomiting, post prandial evacuation of bowel were present	Passing formed stools 2 times a day. Abdominal pain, recal tenesmus, indigestion were relieved. No nausea and vomiting, post prandial evacuation of bowel	22.5.07	28.5.07	7	Symptoms relieved and discharged

3	1368	3½/mc	4	Passing red scanty stools mixed with blood and mucus for 4 times a day. Fever, abdominal pain, Flatulence, rectal tenesmus and tenderness over transverse colon were present	No fever, abdominal pain and rectal tenesmus passing formed stools once a day.	22.5.07	29.5.07	8	Symptoms relieved and discharged
4	1379	6/fc	3	Passing red scanty stools mixed with blood and mucus. Fever, abdominal pain, rectal tenesmus and tenderness over descending colon were present	Passing formed stools 2 times a day. Rectal tenesmus and abdominal pain were slightly reduced. No fever	23.5.07	28.5.07	6	Symptoms reduced and discharged
5	1631	4½/mc	3	Passing brown stools for 4 times a day. abdominal pain, tenesmus, abdominal discomfort, indigestion, flatulence, nausea, vomiting and tenderness over caecum and ascending colon were present. Post prandial evacuation of bowel is present	No abdominal pain, discomfort and tenesmus passed formed stools 2 times a day. No nausea and vomiting. No postprandial evacuation of bowel.	21.6.07	25.6.07	5	Symptoms relieved and discharged

6	1717	12/mc	3	Passing red scanty loose stools mixed with blood and mucus, abdominal pain, discomfort, indigestion,flatulence, rectal tenesmus and tenderness over descending colon were present	Abdominal pain, indigestion and rectal tenesmus were relieved. No fever-patient passed formed stools 3 times a day	4.7.07	8.7.07	5	Symptoms relieved and discharged
7	1823	5/mc	3	Passing loose stools often mixed with blood and mucus. Fever, abdominal pain and discomfort, rectal tenesmus, tenderness over descending colon were present	Passed formed stools 2 times a day. Abdominal pain, rectal tenesmus were slightly reduced. No fever	14.7.07	18.7.07	5	Symptoms reduced and discharged
8	1837	11/fc	2	Abdominal discomfort, abdominal pain, indigestion, flatulence, passing brown stools mixed with blood and mucus for 6 times a day, rectal tenesmus, tenderness over ascending colon, postprandial evacuation of bowel, nausea and vomiting were present	Passing formed stools 2 times a day. Abdominal pain, indigestion and tenesmus were relieved. No nausea, vomiting and post prandial evacuation of bowel	17.7.07	20.7.07	4	Symptoms relieved and discharged

9	2017	12/mc	1	Passing red scanty tools 4 times a day, fever, abdominal pain, discomfort, rectal tenesmus, tenderness over transverse colon were present.	Passing formed stools 2 times a day. Abdominal pain and tenderness slightly reduced	7.8.07	9.8.07	3	Symptoms reduced and discharged
10	2037	10/fc	1	Fever, abdominal pain and discomfort, indigestion, flatulence, passing red scanty stools with blood and mucus 6 times a day, rectal tenesmus, tenderness over caecum and ascending colon were present	Abdominal pain, indigestion, rectal tenesmus were relieved passing formed stools 2 times a day. No fever	8.8.07	10.8.07	3	Symptoms relieved and discharged
11	2066	10/fc	2	Passing loose stools with blood and mucus 5 times a day, abdominal pain, abdominal discomfort, tenderness over the descending colon were present	No abdominal pain and discomfort. Passing formed stools 3 times a day	12.8.07	14.8.07	3	Symptoms relieved and discharged

12	2143	12/mc	2	Passing red stools with blood and mucus 6 times a day, rectal tenesmus, abdominal pain, discomfort, indigestion, tenderness over transverse colon were present	Passing formed stools 2 times a day. Indigestion, abdominal pain, discomfort and tenesmus were reduced	23.8.07	25.8.07	3	Symptoms relieved and discharged
13	2200	12/mc	2	Passing loose stools five times a day mixed with blood and mucus, abdominal pain, discomfort, fever, tenderness over the ascending colon and caecum were present	Passing formed stools 3 times a day. Abdominal pain and tenderness slightly reduced. Fever subsided	1.9.07	3.9.07	3	Symptoms reduced and discharged
14	2201	11/mc	2	Passing red scanty stools with blood and mucus, abdominal pain, abdominal discomfort, flatulence, rectal tenesums, tenderness over the ascending colon were present.	No abdominal pain and rectal tenesmus passing formed stools 2 times a day.	1.9.07	3.9.07	3	Symptoms relieved and discharged

15	2202	10/mc	2	Post prandial evacuation of bowel, passing loose stools mixed with blood and mucus, abdominal pain, indigestion were present. Tenesmus, tenderness over caecum and ascending colon, nausea and vominting were also present	No post prandial evacuation of bowel – No nausea and vomiting-abdominal pain and tenesmus were slightly reduced patient passed formed stools 2 times a day	1.9.07	3.9.07	3	Symptoms reduced and discharged.
16	2203	8/mc	2	Passing red loose stools with blood and mucus abdominal pain and discomfort, tenesmus, tenderness over the transverse colon were present	Passing formed stools 2 times a day. Abdominal pain, tenesmus were relieved	1.9.07	3.9.07	3	Symptoms relieved and discharged.
17	2284	8/fc	2	Abdominal pain and discomfort, flatulence, passing loose stools mixed with blood and mucus, tenesmus, tenderness over descending colon were present	Passing loose stools 2 times a day. No fever abdominal pain and discomfort were relieved	10.9.07	13.9.07	4	Symptoms relieved and discharged.

18	2320	10/fc	2	Passing loose stools with blood and mucos, abdominal pain, discomfort, tenesmus, tenderness over descending colon were present	Passing loose stools 3 times a day. Abdominal pain and tenderness slightly reduced	14.9.07	17.9.07	4	Symptoms reduced and discharged
19	2440	7/fc	2	Passing red scanty stools mixed with blood and mucus 4 times a day, abdominal pain, abdominal discomfort, rectal tenesmus, tenderness over transverse colon were present	Passing formed stools 2 times a day. No abdominal pain and tenesmus	29.9.07	3.10.07	5	Symptoms relieved and discharged
20	2465	5/mc	2	Passing red loose stools with blood and mucus, abdominal pain and discomfort, rectal tenesmus, tenderness over descending colon were present	Abdominal pain, discomfort, rectal tenesmus were relieved, passing formed stools 2 times a day	5.10.07	8.10.07	4	Symptoms relieved and discharged.

அத்தி பிஞ்சு

-Ficus glomavata linn

மாதுளம் பிஞ்சு

-Punica granatum linn

வில்வ இலை

-Aegle marmelos linn

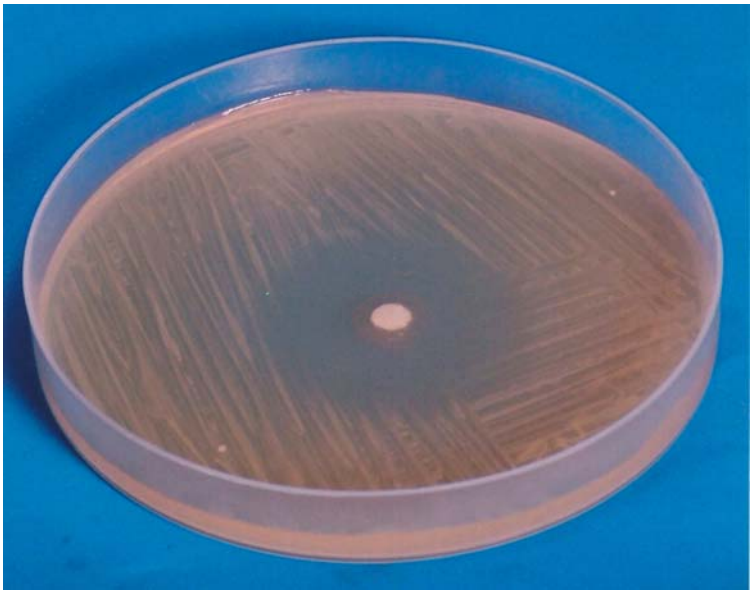
அத்தி பிஞ்சு சூரணம்

ANTIDIARRHOEAL STUDY OF ATTHI PINJU CHOORANAM

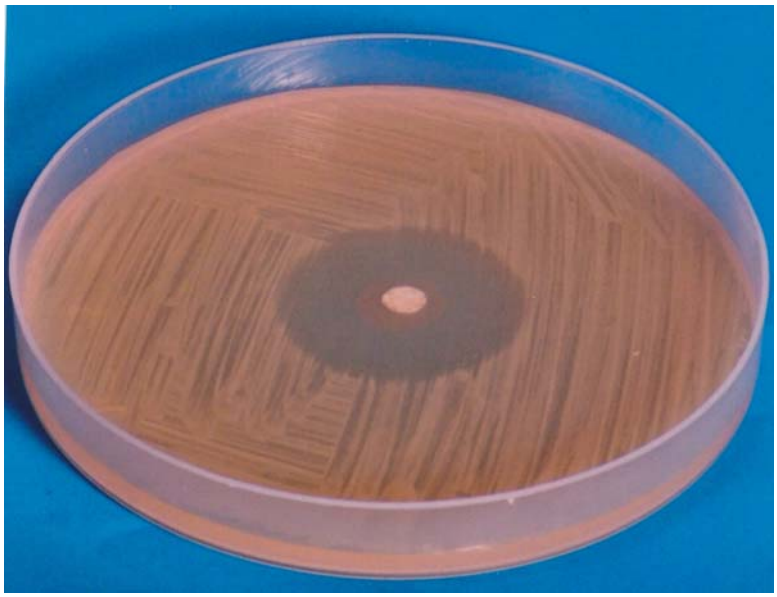
CONTROL

ANTI BACTERIAL ACTIVITY OF ATTHI PINJU CHOORANAM

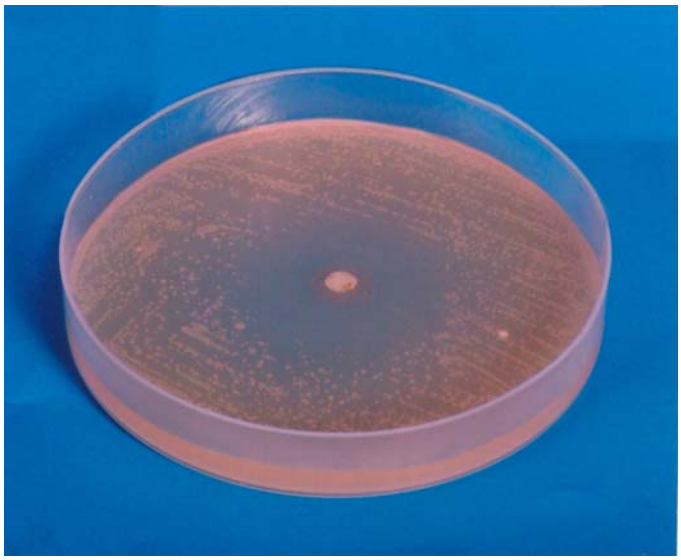
SHIGELLA FLEXNERI



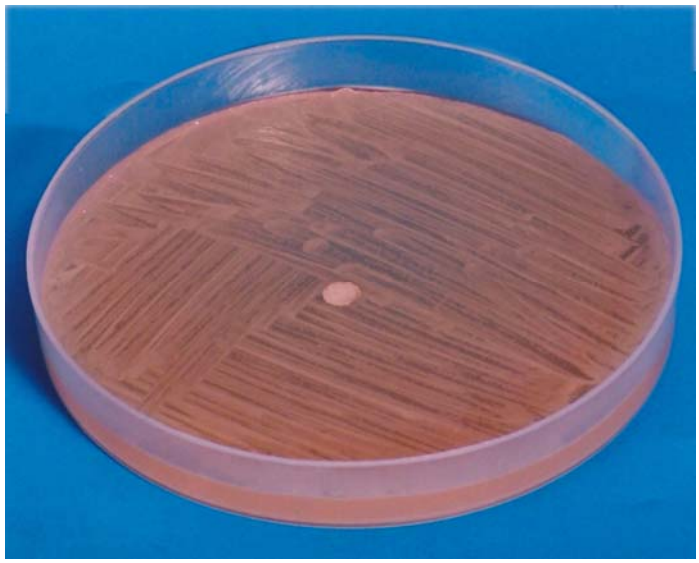
E.COLI



SALMONELLA. TYPHI



KLEBSIELLA



ANTISPASMODIC EFFECT OF ATHTHI PINJU CHOORANAM